Project Report

Saskatchewan EMS Development Project

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SASKATCHEWAN EMS DEVELOPMENT PROJECT

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I.
INTRODUCTION

Terms of Reference

The ultimate purpose of this project is to develop recommendations on the design of a provincial Emergency Medical Services (EMS) system that is patient-centred, co-ordinated, and ensures the most effective use of available resources.

In order to develop valid and achievable recommendations, it is necessary to seek the answers to numerous key questions. The following questions provide an initial starting point for developing the final EMS system recommendations:

- How should emergency medical service dispatch processes and infrastructure be established to ensure co-ordination of the EMS system?
- How should the EMS system response resources be deployed and distributed to achieve effective coverage and equitable access to the health care system?
- How should the multiple EMS providers be organised to ensure effective co-ordination in responding to medical emergencies and providing patient transport within the Saskatchewan Health system?
- How should the EMS system be structured and where should ambulances, aircraft, and other medical transportation units be located to provide a consistent and timely response?
- What are the appropriate levels of care and qualifications of emergency medical services personnel?
- What is an appropriate expectation for residents of the Province regarding response times for EMS resources?
- What are the associated costs for achieving timely response with qualified, professional personnel?
- What should be the priorities and timelines for implementing improvements in the EMS system?
- What is the appropriate sharing of costs between the provincial health system and the users of the system?
- What rates and charges should be implemented to provide for equity among EMS system users?

These and numerous other questions provide the foundation for determining the most effective and efficient design model for Saskatchewan EMS.

The terms of reference for the Emergency Medical Services Development Project are included in Attachment A.

Project Methodology

In June 2000, the Minister of Health identified two co-leaders for the project, Dr. Jim Cross and Mr. Richard Keller. Saskatchewan Health assigned significant resources to provide the research and analytical support for the project. The aggressive timelines for the project required an extensive commitment from Saskatchewan Health and other stakeholders and providers within the provincial EMS system. An Advisory Group, with three representatives from each of the Saskatchewan Association of Health Organisations (SAHO) and the Saskatchewan Emergency Medical Services Association (SEMSA) and one representative from the Saskatchewan Paramedic Association (SPA), provided information and advice to the project co-leaders. Multiple meetings and interviews were conducted with system stakeholders. More than 200 individuals had the opportunity to provide input and receive briefings regarding the project, processes, and expected outcomes. These groups included ambulance services providers from health districts, contracted services, and volunteer services. The professional associations of EMS personnel, nurses, physicians, and licensed practical nurses were also involved in the process. Meetings were held with six different labour unions. Other contacts were made with individuals and organisations in other provinces to collect specific data and information.

A survey was used to confirm that the project was addressing the most pertinent issues according to the service providers - ambulance services and health districts (Attachment B). Service providers were also surveyed on at least two other occasions to collect accurate information regarding their operations, costs, and opinions.

Data Analysis

The most resource and time intensive component of the project was in identifying and analyzing available data. Multiple sources of data were used throughout the project. Fortunately, Saskatchewan Health has collected and maintained electronic files for all ambulance calls within the Province for the last number of years. This allowed members of the working team to develop simulations and projections based upon real rather than hypothetical data. Three years of actual ambulance data, from fiscal year 1996-1997 through fiscal year 1998-1999; were used to identify call volume, response times, locations of patients, and destinations for the patients. It was also possible to differentiate between emergency, non-emergency, and inter-facility transports through this database. This core data proved invaluable in identifying the most appropriate locations from which ambulances should provide coverage, determining the number of ambulances required in each coverage area, calculating required staffing levels, and grouping coverage areas based upon proximity to other ambulance services as well as actual patient destinations.

Audited financial statements from 28 ambulance services were used as part of the costing process. These financial statements were provided to Saskatchewan Health in 1998-1999 for use by the Ambulance Charges and Wages Working Group. The working team modified budgeting templates used in other

ambulance services in North America to reflect Saskatchewan based costs. The results were used to corroborate data collected from the surveys and financial statements.

The database of ambulance calls was linked to a mapping system in order to determine response times, distances and resources to be deployed to achieve the benchmarked response times for emergency calls.

Other data were used in the project including clinical research information from EMS studies, a study completed in 1996 by Jack C. Stabler and M. Rose Olfert that categorizes Saskatchewan communities into a six-tier trade centre hierarchy; a report prepared in June, 1997 by the Health Services and Utilization Research Commission (HSURC) entitled, "Rural Emergency Medical Services Systems: A Review of the Research and Evaluation Literature"; and multiple other sources.

Multiple other documents were used and reviewed throughout the project including collective bargaining agreements, studies, acts and regulations, human resource reports, policies and procedures, protocols, training curricula, and others. A listing of some of the documents reviewed is included in Attachment C.

Desired Project Outcome

Project outcomes and the recommendations of this report can be categorized into two major areas. First, provide recommendations for changes to the current EMS system to optimize the use of current resources. It is important to maximize the value received for the current level of expenditures by the Province and by the individual users. Many of the recommendations and system design changes are geared at making the existing system more efficient and effective, and at achieving better value for the resources committed to emergency medical services.

The second step in the process was to identify needed system improvements and provide recommendations on how these improvements can be implemented. The estimated costs associated with the improvements were also calculated during the project.

The following list identifies some of the desired project outcomes. These items form the basis for the findings and recommendations of this project. The steps taken to provide the appropriate basis for the findings and recommendations include:

- Determine appropriate response time goals for emergency calls.
- Determine the locations of ambulances necessary to provide adequate coverage and achieve the identified response time goals.
- Identify the number of ambulance vehicles required and the number of ambulances that should be staffed during any period of the day, throughout the Province.
- Provide a system for ensuring additional coverage to remote areas of the Province.
- Determine the most cost effective and efficient manner to provide dispatch services.

- Estimate the costs associated with each of the recommendations and system changes.
- Provide recommendations for equitable user charges and sharing of system costs with the Province.
- Outline specific funding mechanisms for emergency medical service and medical transportation.
- Recommend a phase-in strategy identifying the priorities for implementation and an achievable timeline.

The processes used to address each of these items are presented in detail later in the report.

II.
EMERGENCY MEDICAL SERVICES SYSTEMS

Overview of Emergency Medical Services

Emergency medical services are often misinterpreted to consist only of emergency ambulances and their emergency response to acute illness or injury. This grossly understates the components that make up effective emergency medical services. Emergency medical services should reflect the entire continuum of patient care, treatment, and transportation for patients outside of the hospital environment. Using this broader definition of emergency medical services introduces a better understanding of the multiple providers and agencies required to ensure prompt response, effective treatment, and appropriate medical transportation for patients within a health care system.

The participants in an effective emergency medical services system include members of the communities, patients, first responders, other public safety agencies such as law enforcement and fire services, ambulance services and their Emergency Medical Technicians (EMTs) and paramedics, health care providers at clinics and nursing stations, physicians overseeing patient care and protocols, dispatch centres, and medical personnel at hospital emergency departments. The patient's needs in emergency events can only be met through the effective co-operation of multiple individuals and agencies. One way to better understand the relationship and the workings of emergency medical services is to walk through the anatomy of a call.

Anatomy of a Call

An emergency event begins with the sudden onset of an acute emergency condition. Depending upon the understanding of the patient or bystanders regarding the emergency medical services system, help is summoned. This generally occurs through calling 9-1-1 or some other emergency number. If the community has a sound basis and understanding of the EMS system, the time lapse from the onset of symptoms to the summoning of help can be very short. Bystanders or family members may be able to initiate certain pre-hospital treatments such as Cardio-Pulmonary Resuscitation (CPR) in critical events.

The emergency call typically is answered at a Public Safety Answering Point (PSAP) where the operator will request the definition of whether the emergency is for fire, police, or ambulance services. This emergency caller is then forwarded to the appropriate dispatch centre depending upon the type of emergency. The EMS call is received in a dispatch centre where the call-taker first identifies the location of the patient and the nature of the problem. Depending upon the nature of the problem, additional instructions may be provided to the patient, the patient's family or bystanders for treatment and aid to be provided prior to the arrival of emergency medical personnel.

Concurrently, the EMS dispatcher would identify the location, establish the closest ambulance to respond to the event, assign a priority or severity level to the call, dispatch the appropriate ambulance, and in many circumstances send first responders to the patient's location. Typically the first responders will arrive at the scene first and begin to stabilize and provide emergency treatment, at a basic level, to the patient.

After the ambulance arrives, the crew continues providing treatment and stabilization to the patient and prepares the patient for transport to the nearest medical facility capable of treating the patient's condition. If necessary, advanced level personnel such as EMT-Advanced (EMT-A) and paramedics may request consultation with a physician via radio or telephone in order to provide more advanced treatment therapy such as the administration of certain medications.

Once the patient is prepared for transport, the ambulance crew transports the patient to the nearest appropriate medical facility, which is typically the emergency department of a hospital. The ambulance crew will unload the patient at the emergency department and turn over care responsibility to emergency department personnel and provide both a written and verbal report regarding the patient's condition and prior treatment.

Each of the components identified in the anatomy of a call consumes time. In some emergency conditions, time is critical in determining the final outcome of the patient. Therefore, every effort is made to minimize the time from the onset of the medical event until delivery to definitive care. The time interval that begins at the receipt of the call at the emergency dispatch centre, through the collection of adequate information to respond an ambulance (location and nature of the problem) until a fully staffed ambulance arrives at the scene that is capable of treating and transporting the patient, is called the *response time*. From the patient's perspective this is the most critical time element in the entire event—from the time of the call for help until somebody arrives to treat and transport the patient.

Response time performance is dependent on a number of factors including rapid identification of the exact location of the patient, the system deployment of ambulance resources throughout its coverage area, the selection of the closest ambulance for emergency response, the ability of the ambulance crews to find the patient's location, and the current workload or demand within the system at the time of the event.

Ultimately an EMS system strives to shorten response times for ambulances to patients in emergency medical situations and to ensure that personnel with appropriate levels of training are delivered to the scene in order to stabilize, and transport the patient.

EMS in Saskatchewan

EMS in Saskatchewan has not been fully integrated into the health system and is still largely perceived as consisting solely of the ambulance services. There are 113 licensed ambulance services in Saskatchewan. These services are funded through the 32 health districts. The services vary in terms of staffing; some are full-time, while others are staffed by volunteers, call-in personnel, and/or casual employees. Only 14 ambulance services in the Province are staffed on a full-time basis, 24-hours a day, 7 days a week. [Note: The definition of full-time service used in this report is that the staff are paid and on-site 24 hours per day, 7 days per week.] The locations of the ambulances distributed throughout the Province have largely been determined by local politics and evolution. These services and their deployment of units largely remains the same as it was prior to health reform, when ambulance services were administered through 108 independent ambulance boards. This evolutionary process cannot result in the deployment of ambulances that achieves optimal response times and the most efficient and effective use of resources.

Dispatch of ambulances is provided through a variety of methods—some extremely sophisticated using modern technology and dispatching methods, while others remain rudimentary and depend upon untrained individuals answering telephones and dispatching ambulance personnel. There are six dispatch centres that dispatch over wide areas and for multiple ambulance services in the Province. These dispatch centres provide services to 84 ambulance services. The remaining services use a number of other, often less sophisticated, dispatching arrangements.

The training and skill capability of personnel vary widely throughout the Province from Emergency Medical Responders (EMR) with 40 hours of training to advanced life support EMT-Paramedics whose training and skill levels match any ambulance service in North America. There are primarily four different levels of training within the Province: Emergency Medical Responder, EMT-Basic, EMT-Advanced, and EMT-Paramedic. A number of communities within the Province have developed programs for medical first responders where individuals respond to the patient's scene and begin treatment prior to the arrival of the road ambulance from more distant locations.

The Saskatchewan EMS system is not well co-ordinated and has widely variable levels of performance throughout the Province. Each health district in effect is designing its own localized EMS system without the aid of a co-ordinated provincial plan. Implementation of the recommendations of this report will go a long way in establishing such a provincial EMS plan. The desired results of this process are to establish realistic and equitable expectations for Saskatchewan EMS patients. The two primary goals are to define equitable performance targets for response times in emergency events and to ensure the quality and skill levels of personnel responding. The following section addresses the issues of creating reasonable expectations for response times and capability of EMS personnel.

III
SASKATCHEWAN EMS PERFORMANCE TARGETS

Overview

Creating benchmarks or performance targets for the Saskatchewan EMS system is difficult for two primary reasons. First, little clinical research has been conducted that definitively determines the efficacy of emergency medical services, particularly with regard to response times and treatments provided. Second, unique characteristics of the Province of Saskatchewan make it impossible to compare performance goals established elsewhere. Even so, it is important that the residents of and visitors to Saskatchewan be assured that in the event of a medical emergency, they can summon and receive prompt assistance.

The two areas important for defining expectations are in the promptness of emergency response and the level of training and capabilities of personnel responding to the events. This section addresses these two important components for consideration in the development of the Saskatchewan EMS plan.

Response Time Goals

Ideally, the response time standards would be determined by clinical research supporting favourable patient outcomes. Unfortunately, such data do not exist. Limited studies have been conducted that consider the impact of short response times on cardiac arrest patients. These studies indicate that better outcomes are achieved if EMS response times from 8 to 10 minutes are provided after a witnessed cardiac arrest. The most important factor in determining patient outcome is the promptness of defibrillation of the cardiac arrest patient in ventricular fibrillation. In Saskatchewan, cardiac arrest patients represent approximately nine-tenths of one percent of all EMS calls. Therefore, it is unrealistic to base the design of the entire EMS system on this small fraction of patients. More importantly, achieving province-wide response times of 8 to 10 minutes would be cost-prohibitive, if not impossible.

Another time interval supported by literature is based on the outcome of trauma patients. It is clear that trauma patients' survivability depends upon reaching definitive care within one hour from the time of injury. But, even in studies of trauma patients, favourable outcomes are more dependent on a well-organised trauma system than specific time components of the ambulance services.

In the analysis used to determine an appropriate response time expectation for the Saskatchewan EMS system, we used these two time intervals as the minimum and maximum ranges. In other words, response time targets of between 10 and 30 minutes were used, as this would generally allow the patient to access

definitive care within one hour. Given this wide interval, it was determined that further analyses should be conducted to define more specific response time expectations.

A number of assumptions were considered in the analysis, including the assumption that response times could be shortened if ambulances were staffed 24-hours a day, 7 days a week with crews on duty near the ambulance, awaiting calls. Currently within the Province, there are 14 full-time ambulance services operating 24 hours per day, seven days a week (i.e. 24/7 basis). The remainder of the 113 services are staffed through a number of variations including provision of day time staffing with call back provisions for evenings, nights and weekends; volunteer staffing where ambulance personnel respond to an ambulance from home or work after a call has been received; and many other variations. It is clear that ambulances staffed on a full-time basis ready to respond can cover larger areas with shorter emergency response times.

Clearly, the provincial average time to respond to an emergency call will decrease as full-time ambulance coverage is added to more areas of the Province. A hypothesis was developed that as additional areas receive full-time ambulance coverage, there would be smaller improvements in the emergency response times. In other words, it was hypothesized that there will be a readily identifiable point of diminishing return where the incremental cost of adding additional full-time ambulances will far exceed the benefits associated with incremental improvements in emergency response time.

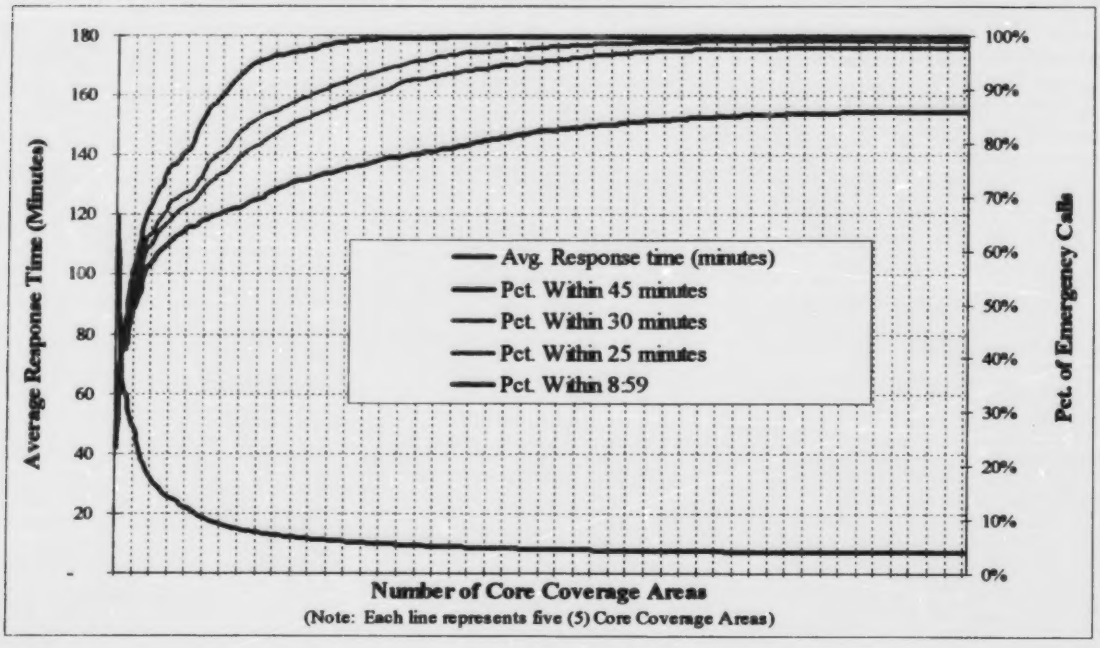
In order to test this hypothesis, an extensive analysis of all emergency calls over the last three years was accomplished. The actual pickup location for each emergency call was identified for each of more than 880 residence codes (rescodes). These call volumes and locations were linked to Saskatchewan Health's geographic information system (GIS) and simulations were created in order to determine the optimal placement of full-time ambulance units to achieve the best possible response times. This simulation calculated various response time measures as more full-time ambulances are strategically added in core coverage areas throughout the Province to maximize response time performance. The results of this analysis are presented in the three following charts.

The first chart (Figure 1) provides the results of the simulation based upon the last three years of emergency calls in southern Saskatchewan [Note: For purposes of this report, southern Saskatchewan excludes the geography encompassed by the Keewatin Yatthé and Mamawetan Churchill River Health Districts and the Athabasca Health Authority] and shows predicted response times based on the number of full-time ambulance units. As can be seen on these charts, as additional full-time ambulances are placed throughout the province, there are indeed increasingly smaller improvements to be gained in terms of the various emergency response time measures. Based on the results presented in these graphs, it is apparent that diminishing returns in response times occur after approximately 67 core coverage areas are established in the southern portion of the Province.

Providing full-time staffing for 67 core coverage areas results in the following response time expectations for southern Saskatchewan:

- approximately 95 percent of emergency calls would be responded to within 30 minutes;
- approximately 99 percent of emergency calls would be responded to within 45 minutes;
- the average response time on emergency calls would be approximately 10 minutes.

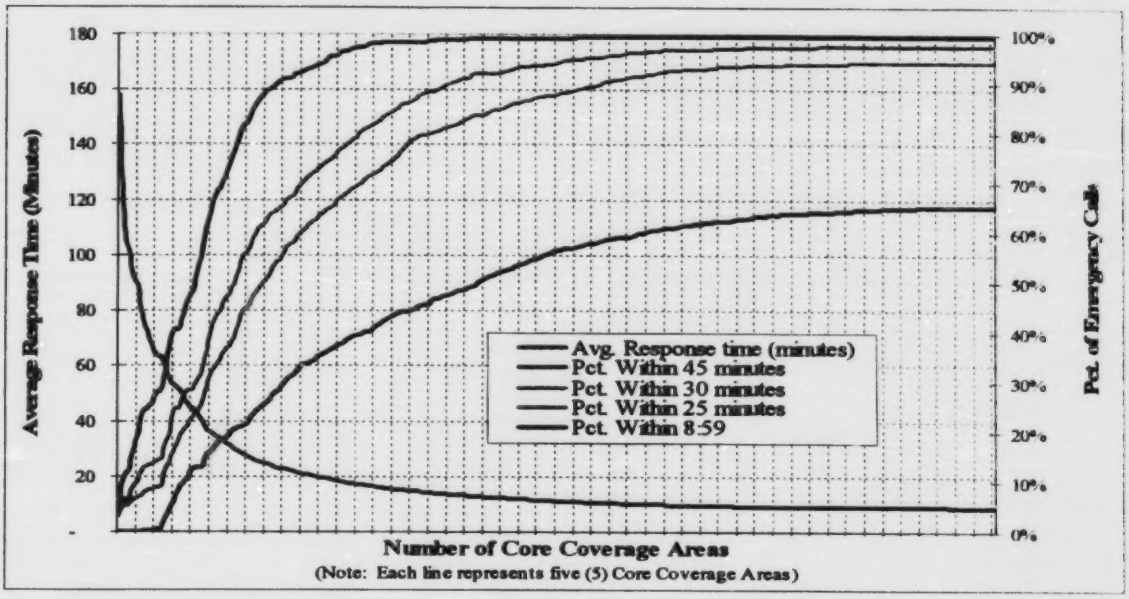
Figure 1: Predicted Response Times Based on Number of Ambulance Locations, Province-wide



It is also important to look at the impact on both residents of the 10 largest communities and those residing outside of these population centres. The next chart (Figure 2) reveals the result of the simulation for emergency responses to locations outside of Saskatchewan's 10 major cities. Again it is possible to see the points of diminishing return where adding numerous additional full-time ambulances yields minimal improvements in response times. Using the 67 core coverage areas the performance expectations for rural southern Saskatchewan would be:

- nearly 90 percent of emergency calls would be responded to within 30 minutes;
- approximately 98 percent of emergency calls would be responded to within 45 minutes;
- the average response time on emergency calls would be approximately 14 and one-half minutes.

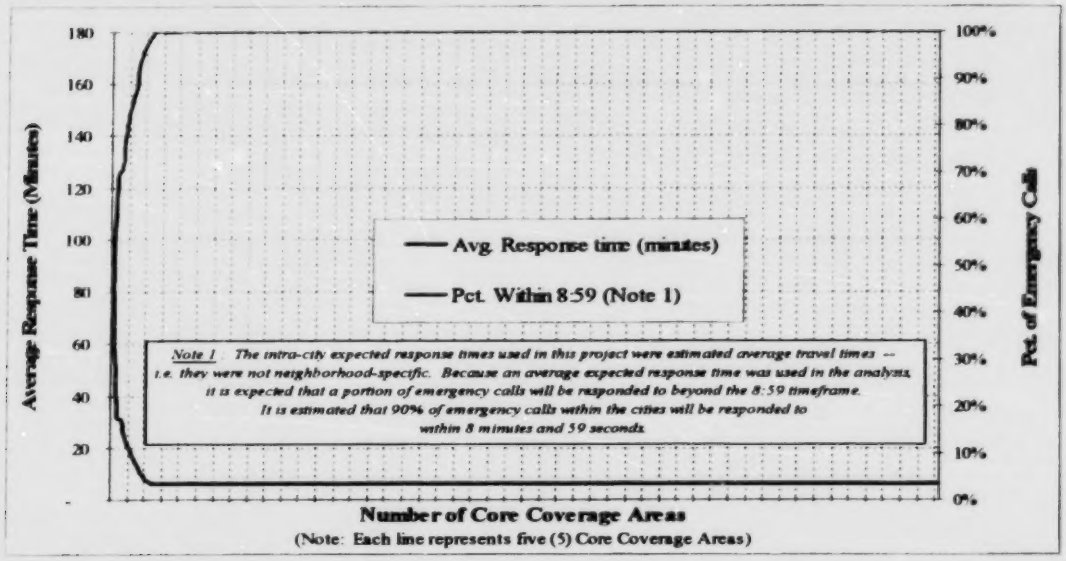
Figure 2: Predicted Response Times Based on Number of Ambulance Locations--Outside of 10 Major Cities



The final chart (Figure 3) looks at the 10 major cities in the Province and identifies the number of coverage areas required to be staffed on a 24-hour basis to achieve response time performance of 90 percent within 8 minutes and 59 seconds. This chart reveals that it is possible to achieve 90 percent within 8 minutes and 59 seconds for these more urban areas in Saskatchewan. The resulting average response time is estimated to be approximately just over 6 minutes.

All three sets of performance expectations reflect response time achievement on a province-wide basis. As such, response time performance expectations will vary in different areas of the Province.

Figure 3: Predicted Response Times Based on Number of Ambulance Locations—Within 10 Major Cities


Average Response Time (Minutes)
180
160
140
120
100
80
60
40
20
-
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
Pct. of Emergency Calls
Avg. Response time (minutes)
Pct. Within 8:59 (Note 1)
Note 1 The intra-city expected response times used in this project were estimated average travel times -- i.e. they were not neighborhood-specific. Because an average expected response time was used in the analysis, it is expected that a portion of emergency calls will be responded to beyond the 8:59 timeframe. It is estimated that 90% of emergency calls within the cities will be responded to within 8 minutes and 59 seconds.
Number of Core Coverage Areas
(Note: Each line represents five (5) Core Coverage Areas)

Providing prompt emergency response is the most expensive component of emergency medical services. Vast amounts of resources must be allocated to ensure that an ambulance and crew are ready to respond on a moment's notice. This readiness factor is the most significant determinant of cost. It also creates a system in which there is excess capacity for personnel to accomplish other tasks or fulfil additional roles.

The optimum number of 67 core coverage areas determined through data analysis, simulation, and identification of the point of diminishing return will be used throughout this report in developing a high performing EMS system for the Province of Saskatchewan. The 67 core coverage areas determine where ambulance resources should be deployed, how many ambulance-hours (or unit-hours) should be staffed, and provide the framework for determining the cost of the Provincial EMS system and developing an efficient and effective organisational and co-ordination structure. These aspects are discussed comprehensively in subsequent sections of this report.

The dispersion of population in the North, the lack of road infrastructure, and long distances between medical facilities, make it impossible to identify viable core coverage areas. Therefore, a specific allocation of additional EMS funding is to be used to increase full-time ambulance coverage in some Northern areas, but is largely earmarked for setting up integrated EMS delivery arrangements.

Staffing Levels

A pragmatic approach was taken to determine the most appropriate staffing levels for ambulances within the Province. Staffing levels refer to the capabilities, skills, and certification level of personnel. There are currently six levels of training for EMS personnel. These include:

- First Responders
- Emergency Medical Responders
- Emergency Medical Technician – Basic
- Emergency Medical Technician – Advanced
- Emergency Medical Technician – Paramedic
- Critical Care Nurse

Each of the certification levels is described below.

First Responder: First responders are members of the community that are notified when an emergency has occurred and respond to the scene in their personal vehicles. First responders undergo 40 hours of training and are capable of providing basic first aid, the administration of oxygen, and automatic external defibrillation (AED).

Emergency Medical Responder: Emergency medical responders typically are members of the ambulance crew who provide first aid and a minimal number of other basic treatments. The EMR is capable of providing basic first aid, the administration of oxygen, automatic external defibrillation (AED) and other basic treatments. The EMR has basic first aid training and is required to have CPR-C certification.

Emergency Medical Technician–Basic: The EMT is the international standard for the basic level of service to be provided by an ambulance service. The EMT is able to provide basic life support, which includes bandaging, splinting, administration of oxygen, and a number of other treatments. The EMT course consists of 312 hours of didactic and clinical training.

Emergency Medical Technician–Advanced: The EMT-A is able to provide basic life support as well as a specified number of advanced life support modalities including initiating a peripheral intravenous line, establishing advanced airways, defibrillation and the administration of some specific life saving medications. In addition to the EMT course, the advanced EMT has to complete 565 hours of further training.

Emergency Medical Technician–Paramedic: The EMT-P is able to deliver all basic and advanced life support services. The skills include a wide array of advanced airway management, delivery of medications, arrhythmia identification, manual defibrillation, and a number of other advanced skills. The

EMT-Paramedic must complete an extensive curriculum of 1,500 hours over and above that required for the EMT-Basic.

Critical Care Nurse: A limited number of critical care nurses are working in the Saskatchewan EMS system. These specially trained nurses are part of the response crew for Saskatchewan Air Ambulance, and others are members of the critical care transport teams for neonates and pediatric patients.

The EMT-Basic curriculum is specifically designed to prepare an individual to provide basic life support as an ambulance crew member. This course provides training for the students in the specialized equipment available on most ambulances. The vast majority of ambulance services in North America and in Europe identify EMT-Basic as the most appropriate minimum staffing level for ambulances.

Table 1 identifies the number of individuals registered with EMS certification in Saskatchewan Within the licensed ambulance services there are more than 640 EMT-basics, 400 EMR, 100 EMT-A, and just over 100 paramedics. Multiple individuals hold two levels of certification such as nurse/paramedic, EMT/LPN, etc.

Table 1: Number of Certified EMS Personnel by Level

Certification Level	Quantity
Emergency Medical Responder	408
Emergency Medical Technician -- Basic	643
EMT/EMT-A/EMT-P – non-ambulance*	492
EMR/First Responder	142
EMT – Advanced	101
EMT – Paramedic	105
EMT– A/LPN	3
EMT – A/RN	1
EMT/LPN	16
EMT – P/RN	1
EMT/RN	26
LPN/EMR	18
Physician/EMR	1
RN/EMR	59

* Personnel registered by EMS not working with ambulance services.

Since the EMT-Basic curriculum is the only program that provides students with full training in basic life support for care and treatment of patients with acute illnesses or injuries with specialized ambulance

equipment, it is recommended that this be the minimum level of staffing in the Province. At least one individual on every ambulance should be trained at the EMT-Basic level.

Advanced skills, aside from defibrillation, are reserved for EMT-Advanced and EMT-Paramedics. Training and certification at these levels allow caregivers to provide additional therapies to emergency patients such as intravenous (I.V.) therapy and advanced airway management. These skills are particularly relevant and valuable when there is going to be an extended period of time before the patient can reach definitive care in an emergency department. Within the Province, ambulance personnel with advanced training have been primarily located in the urban areas. This is particularly true for paramedics. Due to the benefits provided by EMTs with advanced level training during long transports, it is reasonable to develop plans to increase the number of people in rural areas with advanced skills.

The EMS plan established by this report envisions a gradual upgrading of ambulance personnel within the Province. The first stage would result in approximately the following mix of certification levels (Table 2).

Table 2: Proposed Certification Level Mix for EMS Personnel

Ambulances Staffed at the following levels	Full-time equivalents (FTE)
Paramedic/EMT	20%
EMT-A/EMT	20%
EMT/EMT	30%
EMT/EMR	30%

This certification represents a significant upgrade over what is currently available within the Province, particularly when considering the primary recommendation of this report is to increase the number of full-time staffed ambulances throughout the Province.

IV.
VALUE FOR MONEY

Overview

The mandate in the project's terms of the reference concludes that, "The purpose of the project is to make recommendations on a design of a Provincial Emergency Medical System that is client-centred, co-ordinated and ensures the most effective use of available resources." A fundamental principle of the project co-leaders and the working team is that the EMS system should be designed to be as efficient and cost effective as possible given the current level of resources. Only after maximizing the benefit of current expenditures on EMS should improvements to the system be identified with additional resource requirements.

Efforts to maximize the value received for the resources expended focused on four distinct areas:

- Centralizing dispatch and control services;
- Increasing co-ordination and sharing among ambulance services and deployed ambulance units;
- Establishing a provincial ambulance fleet; and,
- Creating co-ordinated non-emergency inter-facility transportation services.

Each of these areas has been addressed with recommendations in order to improve system efficiency and co-ordination, to reduce redundancy, and to increase productivity.

Dispatch

A sophisticated dispatch centre is essential in coordinating and managing an effective EMS system. There are currently 33 different locations for ambulance dispatch. Six wide-area dispatch centres provide dispatching for 84 ambulance services. The remaining 27 ambulance services dispatch themselves or through alternative arrangements. A system with 33 distinct dispatch locations is unable to provide adequate co-ordination of the resources to achieve optimal response times or efficiencies possible through an integrated and co-ordinated system.

A fragmented collection of dispatch centres prevents the development of an individual centre capable of employing sophisticated technology and data processing systems to effectively coordinate ambulance deployment, emergency response, and patient transportation.

The provincial 9-1-1 system is expanding throughout southern Saskatchewan. The 9-1-1 calls will be answered at four Public Safety Answering Points (PSAPs). At each of these centres the caller is questioned as to the type of emergency and is asked whether they need law enforcement, fire, or EMS. Typically the caller is then transferred to the appropriate dispatch centre serving the geographic area where the caller is located. There is no requirement for the EMS system to create the same number of dispatch centres that have been established for 9-1-1 call taking. Therefore, a number of scenarios were evaluated. Three primary scenarios have been developed for this report and they include one province-wide dispatch centre, two dispatch centres (one located centrally and the second in the southern region), and five dispatch centres as proposed by some of the current wide area dispatch organisations.

Operationally, each of the scenarios could be implemented. Examples of each of the scenarios are available throughout Canada and the rest of North America. The analyses used in this project were based upon which scenario provided the greatest levels of economy, efficiency, and co-ordination. Table 3 summarizes the operating and one-time capital expenditures for the three separate scenarios. The resources identified in the table are for extremely sophisticated and technologically advanced EMS dispatch centres that could match the performance of any centre in North America. The capital infrastructure includes state-of-the-art computer-aided dispatch systems, a satellite tracking system to identify the location of all available ambulances, recording systems, adequate radio communication equipment, direct interface with the 9-1-1 system, and electronic reserve power and generator backup components. While some of the wide-area dispatch centres currently operating within the Province are very sophisticated and perform at high levels, none have of the advanced technological components and staffing levels proposed in this report.

Table 3: Dispatch Centre Funding Summary

	One Dispatch Centre - 8 seats staffed		Two Dispatch Centres - 9.5 seats staffed		Five Dispatch Centres - 13 seats staffed	
	FTE	Cost	FTE	Cost	FTE	Cost
OPERATING EXPENSES:						
Personnel Salaries	45.19	$1,709,514	56.92	$2,170,747	87.02	$3,367,266
Employee Benefits (@ 17.00%)		$290,617		$369,027		$572,435
Salaries and Benefits		$2,000,131		$2,539,774		$3,939,701
Non-Salary Operating Expenses		$471,400		$701,247		$1,396,341
Capital Replacement		$695,595		$1,125,087		$2,220,039
Total Annual Operating Expenses	45.19	$3,167,127	56.92	$4,366,107	87.02	$7,556,081
CAPITAL COSTS:						
Initial One-Time Capital Equipment Costs		$2,678,300		$4,396,800		$8,882,300

The primary arguments for supporting each of the three scenarios are as follows:

- One dispatch centre maximizes provincial co-ordination of EMS resources and minimizes the one-time outlay for capital equipment and annual operating expenses.
- Two dispatch centres provide redundancy in case of catastrophic failure at one location.
- Five dispatch centres more closely reflect the existing system structure and could retain investment and personnel operating within the system.

The recommendation presented in this report is for the Province to establish one centralized dispatch centre for emergency medical services. The rationale is supported by three considerations. First, developing one state-of-the-art centralized dispatch centre is significantly less expensive on a one-time and recurring expense basis than the other scenarios. Secondly, a single centre can provide enhanced co-ordination of all EMS and ambulance activity throughout the Province. And finally, one centre can provide a central location for coordinating other health service activities in the future. These could include bed management, scheduling of diagnostic testing, dispatch and co-ordination of home care, and many other possibilities.

The EMS dispatch centre would be responsible for receiving the call transfers from 9-1-1 centres and answering other seven digit emergency call requests. Centre personnel would interrogate the caller to determine the exact location of the emergency and if appropriate provide instructions to the caller for administering care to the patients prior to EMS arrival. Other personnel within the centre would dispatch the closest appropriate ambulance and direct them to the call using comprehensive mapping databases and automated vehicle tracking systems.

A single centralized dispatch centre also offers the opportunity to establish province-wide medical control. Only Saskatoon and Regina offer field caregivers the opportunity to directly consult with the physicians via radio or telephone on a 24-hours a day, 7 days a week basis. A centralized dispatch centre could include mechanisms to patch personnel throughout the Province to an on-line medical control physician for consultation and directions. The envisioned centre would also have one dispatch position dedicated to providing dispatch and flight-tracking for the Province's air medical services.

In summary, a single dispatch centre would provide the best opportunity to coordinate health services throughout the Province. A nurse or physician at a remote clinic could make one call requesting movement of patient to the most appropriate hospital within the Province to treat the individual's particular condition. The call to the dispatch centre would result in identification of the appropriate hospital with adequate resources and capacity to treat the patient and at the same time initiate the most appropriate method of transporting the patient to that location. It was recognized that initiating the most appropriate mode of transportation for the patient was difficult and very time consuming often requiring numerous telephone calls. These difficulties could be eliminated through an EMS dispatch and health services co-ordination centre.

The primary argument against a single centre is the concern of a catastrophic failure. While this is a valid concern, adequate disaster and recovery plans can be implemented to ensure that there are options in the event of a system failure. Many failures in 9-1-1 systems cannot be avoided through redundancy of dispatch centres. A failure of the 9-1-1 system would incapacitate the system regardless of the number of dispatch centres that are in place. Other types of failures such as tornadoes, floods, and fires can be addressed through the facility construction phases. Finally, to address the extremely rare possibility of a centre failure, alternative plans can be developed that would forward lines to another operating centre or provide mechanisms for EMS dispatch at the 9-1-1 PSAPs. These should be addressed in the implementation plan for establishing a single centre. The cost savings associated with one single dispatch centre in the Province far outweigh the potential risk of failure.

The infrastructure costs for establishing a single centre are estimated to be approximately $2.7 million. The annual operating costs, including capital replacement costs, are approximately $3.1 million per year. As could be seen in Table 3, two dispatch centres and five dispatch centres have significantly higher one time and annual operating costs. Attachment D includes a detailed analysis and documentation to support the cost summary.

The dispatch centre is so essential to the performance and reliability of provincial EMS, it is recommended that the Province invest in, and own, the infrastructure. The management and operations of the centre, on the other hand, can be outsourced. Tenders should be developed for a multi-year management and operational contract to provide the needed expertise and staffing for the provincially owned dispatch centre.

Organisation of Ambulance System

The working team undertook months of detailed analyses and sophisticated computer modelling to determine how ambulance resources should be organised throughout Province in order to achieve the highest levels of efficiency and performance possible. The strategies used to achieve these goals include reducing redundancy among the 113 separate ambulance services by developing a shared service and coverage model, improving system capacity for providing emergency coverage, and identifying the appropriate locations for ambulance deployment in order to achieve the response time goals on a province-wide basis. This extensive analysis has resulted in the development of the key concepts of core coverage area, shared coverage area, and patient flow zone. Each of these concepts is described in more detail in the following sections.

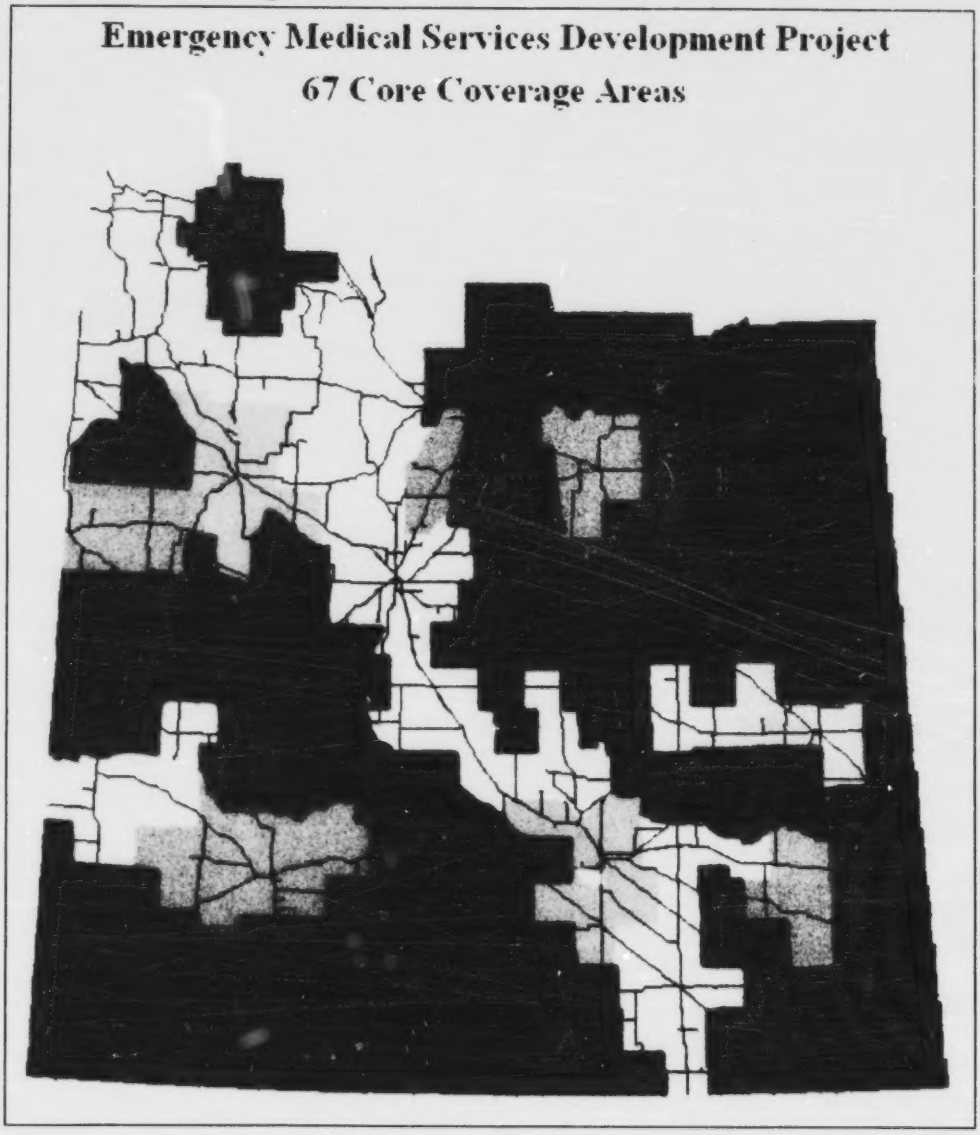
Core Coverage Areas

As discussed in detail previously (on pages 8-12), an optimum number of 67 core coverage areas has been identified for the deployment of full-time, 24/7 ambulance units. This determination was based on the results of considerable data analysis and simulation that indicated that there are diminishing returns to be

gained by adding full-time ambulance coverage to more than 67 core coverage areas. Full-time ambulances located within each of these core coverage areas and providing emergency response will allow the system to achieve the indicated response time performance levels. These 67 core coverage areas are presented in Figure 4.

Full-time ambulances located within each of these coverage areas and providing emergency response allows the system to achieve the indicated response time performance levels. These areas were established based upon the road network and three years of actual emergency call locations. Initially data was analyzed based upon more than 880 Rescodes. This first step of the analysis resulted in identifying many locations without adequate call history to establish patterns. The next level of geographic delineation used in the analysis was at the rural municipality (RM) level. This provided adequate historical experience to develop the 67 core coverage areas. Adjacent RMs were combined to address call demand and geographic coverage capabilities. This combining of the RMs resulted in the 67 identifiable core coverage areas.

Figure 4: Map of 67 Core Coverage Areas



No consideration was given to the current health district boundaries. The development of the core coverage areas has been solely defined by the location of emergency ambulance calls responded to in the last three years as well as geographic and traffic flow patterns.

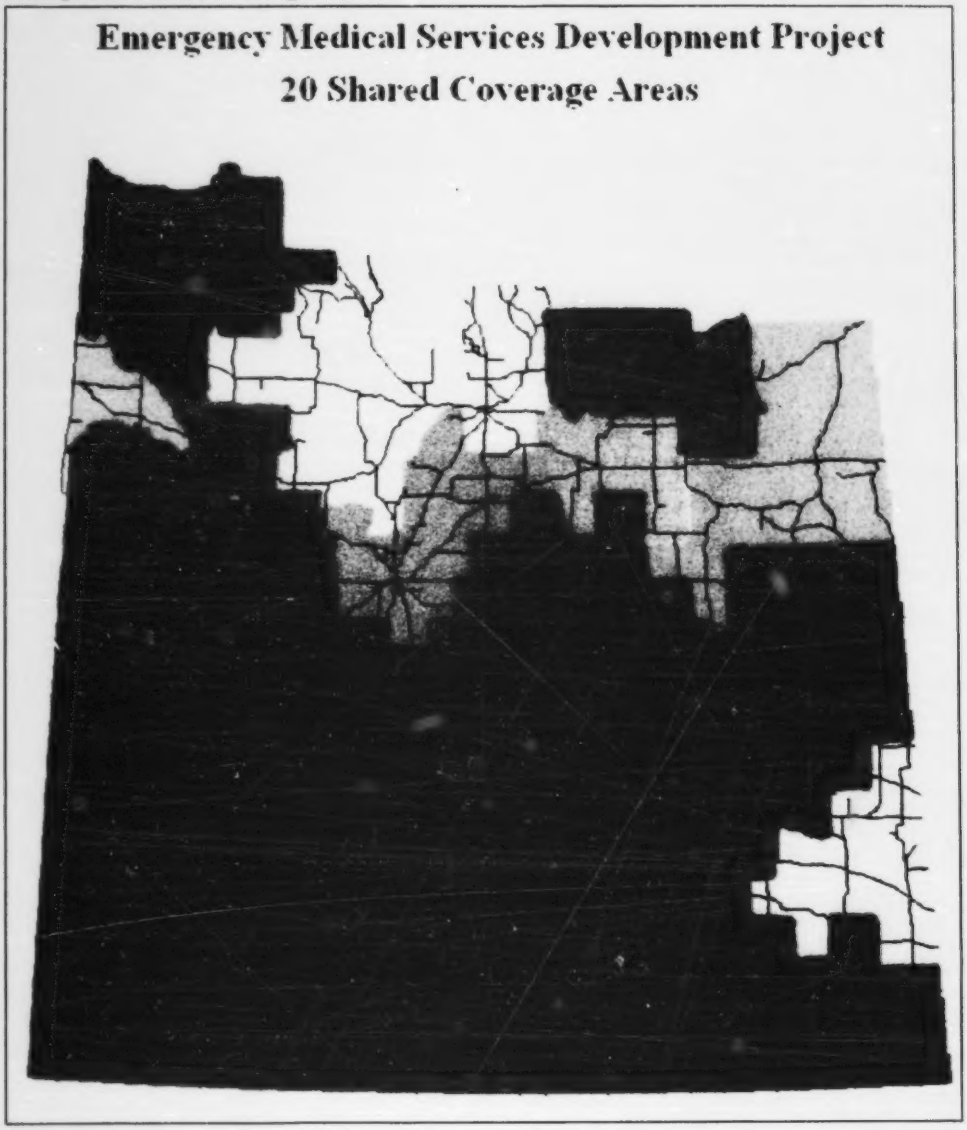
Shared Coverage Areas

One of the realities of emergency medical service deployment is that each ambulance unit needs to be backed up by another ambulance. There are incidents that require multiple ambulances to respond to the same scene such as motor vehicle accidents involving a number of injured patients. Occasionally an

ambulance will be actively engaged on an assignment when another request for service occurs in the coverage area. These additional requests would need to be responded to by the next closest vehicle. Therefore, after identifying the 67 core coverage areas, the next closest unit was determined for each area. This resulted in the combination of two or more coverage areas into a group that could share resources and provide backup to each other.

The map in Figure 5 delineates these shared coverage areas. While the primary consideration was to provide backup, there is the additional advantage of sharing overhead, personnel, vehicles, training programs, and other operational components. For example, independently operated ambulance services typically have to have at least one backup ambulance on site. These backup ambulances are used in the event of a second call or when the primary response vehicle is down due to maintenance. By collaborating with other ambulance units stationed within the shared coverage areas, it is possible to dramatically reduce the number of vehicles required for backup purposes. Similar savings and benefits can be gained through sharing of training programs, data processing, management, and other factors. Overall, this elimination of redundancy provides significant savings to the system.

***Figure 5*: Map of 20 Shared Coverage Areas**



By combining the concept of shared coverage areas with centralized dispatch and 24-hour staffing, it is possible to move ambulances within the shared coverage areas to enhance deployment and response times. For example, if the ambulance in one location of a shared coverage area is engaged on an extended trip, other ambulances within the area may be redistributed to help cover the area vacated by the vehicle on the trip.

One of the interesting results of the analysis of the 20 shared coverage areas was that, for each of the shared coverage areas, the primary destination for ambulance patients is a location within that particular shared coverage area.

Patient flow patterns

A patient flow pattern exists within any health system. An EMS and medical transportation system needs to be designed around patient flow patterns in order to be most efficient. The 20 shared coverage areas identified previously can be grouped based upon patient flow patterns. Developing such a relationship allows for implementing further efficiencies; reducing redundancy; and facilitating better co-ordination, monitoring, and organisation of the EMS system.

The following process was used to group the 20 shared coverage areas into eight identifiable patient flow patterns within the Province:

- The analysis also indicated that, in 17 of the 20 shared coverage areas, the second-most popular destination for patients was either the Saskatoon or Regina shared coverage areas. The three shared coverage areas that were exceptions were as follows:

Patients in the	Second-most popular shared coverage area (i.e. Most popular destination other than itself)
Lloydminster shared coverage area	Meadow Lake
Meadow Lake shared coverage area	Lloydminster
Kamsack/Canora shared coverage area	Yorkton

  In order to accommodate these unique patient flow patterns, the shared coverage areas for the Lloydminster and Meadow Lake areas were combined into a single Northwest shared coverage area. As well, the Kamsack / Canora shared coverage area was combined with its primary destination (Yorkton) to produce a larger Yorkton shared coverage area.

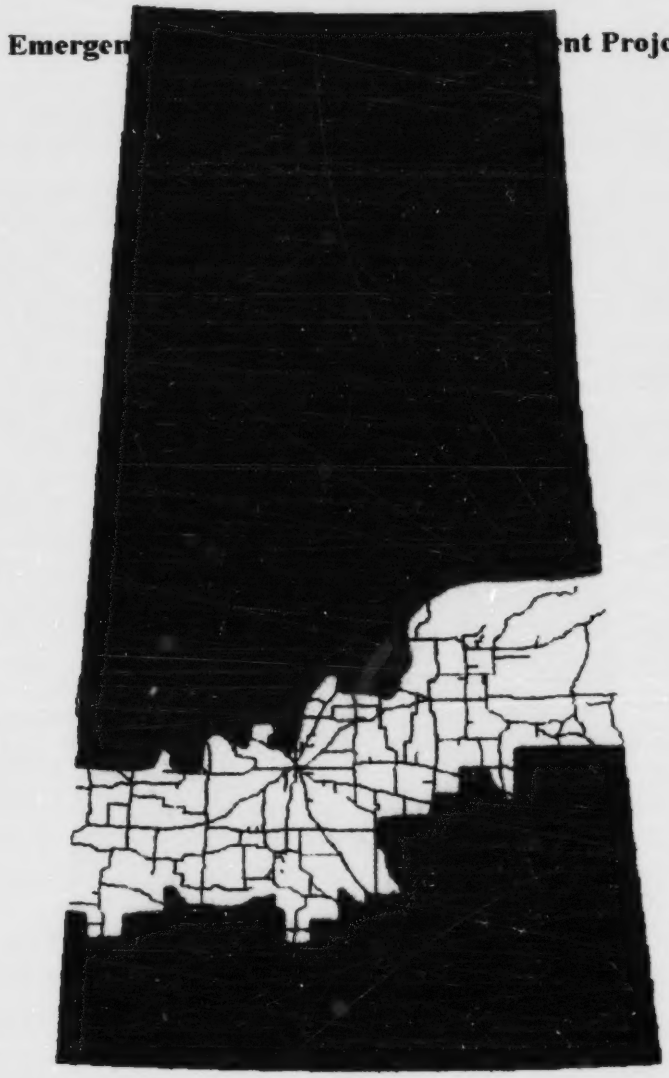
- Of the resulting 18 modified shared coverage areas, the seven (7) shared coverage areas receiving the highest volume of ambulance calls were identified as a unique patient flow pattern.
- The remaining 11 shared coverage areas were assigned to either the Saskatoon or Regina patient flow patterns, based on which of these zones was accessed more frequently as a destination location by EMS patients in each of those areas.
- Northern Saskatchewan was added to southern Saskatchewan based on current patient flows and existing provider relationships. As can be seen on the map in Figure C, the western portion of Northern Saskatchewan is included in the Northwest (i.e. Lloydminster/Meadow Lake) patient flow pattern, while the northern-most and the majority of the eastern portions of Northern Saskatchewan are included in the patient flow pattern that includes Prince Albert.

In determining the eight patient flow patterns, consideration was not given to either current health district boundaries or to perceived or desired EMS patient flow patterns within the Province. Only the actual destinations of patients over the last three years were used in determining the patient flow patterns. As facility capacity changes throughout the Province and various health care services are relocated, changes

in the EMS patient flow patterns may occur. The statistical modelling developed for this project will aid Saskatchewan Health in determining the impact of potential future facility and resource changes on the EMS and medical transportation system and will allow modifications to be made to the patient flow patterns should they be necessary.

Since the eight patient flow patterns represent a collection of ambulance services with a common purpose, with similar destinations and patient flow patterns, it becomes a readily identifiable geographic division for co-ordination, monitoring, and funding.

Figure 6: Map of 8 Patient flow patterns



Ambulance Fleet

Currently there are 249 licensed emergency vehicles in the Province of which 230 are licensed as ambulances. Other than personnel expenses, the most costly components of emergency medical services and medical transportation are the acquisition, maintenance, and operation of the ambulance fleet. Currently, each of the 113 ambulance services purchases and maintains its own vehicles. Many services are operating ambulances in excess of their useful life. As discussed earlier, a number of services have backup vehicles that are infrequently used.

Table 4: Current Ambulance Fleet

Current Ambulance Fleet	
Total ambulance vehicles	230
Number of ambulance vehicles > 5 years old (1994 model year or older)	136
Number of ambulances vehicles > 300,000 km	38

The creation of a provincial fleet could accomplish a number of positive benefits. These include:

- Elimination of vehicles that have exceeded their useful life
- Lower acquisition price due to
  - Quantity discounts
  - Elimination of a portion of sales taxes
- The ability to bundle maintenance into their regularly scheduled payment
- The potential to include province-wide fuel discounts
- The ability to reduce the total number of needed ambulances in the Province by 43 percent.

The primary drawbacks expressed by a number of ambulance services would be lack of flexibility and fears that in a provincial fleet the older vehicles would be allocated to the rural areas. The first issue arises around individual preferences, particularly of crewmembers, for the style, size, options, and configuration of an ambulance vehicle. This can be addressed somewhat through a tendering process that allows for two or three ambulance configurations. It may also be possible to incorporate a number of limited options for a particular service. Even so, there would be some loss of flexibility where each service has previously been able to design its own ambulance vehicles. The second concern regarding the deployment of the older vehicles to rural areas can be readily addressed through the tendering process.

Two of the most significant advantages of purchasing a provincial ambulance fleet and bundling replacement costs into the lease payments for the various ambulance services are regular replacement of vehicles when they reach the end of their useful life and the ability to share backup ambulances between services on a wide-area basis.

The specifications for the fleet purchasing process should include limitations on the useful life of ambulance vehicles in keeping with industry standards. It is recommended that 300,000 kilometres or five years be used as the life expectancy for ambulances. The tender should include provisions for locating reserve vehicles on a regional basis for backup to various services within that area and include provisions for all maintenance and fuel.

Participation in the fleet acquisition program by the individual services should be optional. However, it is anticipated that it would be difficult for an individual service to get the financial benefits that could be achieved through provincial acquisition of ambulance vehicles.

Non Emergency Inter-facility Transportation

An analysis was conducted to determine the primary receiving hospitals throughout the Province. The methodology identified ambulance transportation between health care facilities originating outside of the facilities' core coverage area. The purpose was to identify potential locations for centralizing non-emergency medical transportation among health care facilities. These types of transports are typically scheduled and are not as time sensitive as emergency responses. They include the transfer of patients from long-term care facilities to hospitals for admission, scheduled diagnostic testing such as MRIs and CT scans, and discharges back home. It is now necessary for the local ambulance to take the patient on these long distance transports. In many cases this takes the sole ambulance out of the system and reduces the capacity for the service to respond to emergency events. Often there is a significant amount of waiting at the destination for the patient to be evaluated and to determine whether the patient is going to be admitted or not. A number of other inefficiencies are derived such as when ambulances return empty from taking a patient to a hospital from a long distance away, while another patient may be awaiting a return from that same hospital to an area close to where the ambulance is stationed.

Approximately seven different communities throughout the Province receive a significant number of long distance transports from other health care facilities. Transferring the responsibility of providing these transports to the ambulance service near the receiving centre increases system efficiencies. It reduces the chance of an area having a single ambulance being out of service because the ambulance is away on a long distance transport. It also allows for the more efficient scheduling and co-ordination of both transports to the primary receiving hospital and discharges from the hospital.

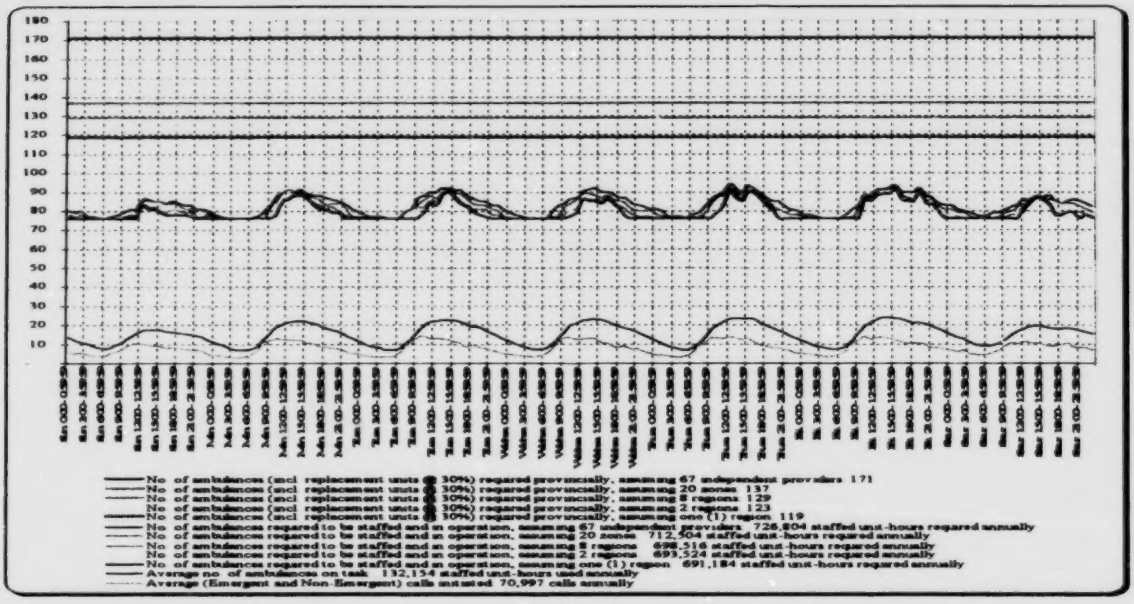
By combining the co-ordination potential of a centralized dispatch centre with seven primary non-emergency inter-facility transport services, it is possible to achieve efficiencies within the system and enhance emergency coverage particularly in the outlying areas. These non-emergency inter-facility transports represent a relatively small number of the total transports completed annually within the Province. Approximately 4,600 transports fall into this category.

Impact of Efficiency Enhancements

Implementing the four processes described in this section results in significant efficiencies within the EMS system. The graph presented in Figure 7 quantifies the impact.

The top five straight lines on the graph represent the number of ambulances required within the Province to achieve the proposed response time performance levels based upon how effectively services integrate and co-operate with each other throughout the Province. Currently there are 230 licensed ambulances within the Province. Implementing a fleet wide acquisition program and placing ambulances within the 67 core coverage areas requires 171 vehicles. This includes a minimum of 30 percent reserve vehicles within each of the core coverage areas.

Figure 7: Impact on Fleet Size and Personnel Requirements Based on Amalgamating Services, Demand and Productivity


180
170
160
150
140
130
120
110
100
90
80
70
60
50
40
30
20
10
No of ambulances (incl replacement units @ 30%) required provincially, assuming 67 independent providers 171
No of ambulances (incl replacement units @ 30%) required provincially, assuming 20 zones 137
No of ambulances (incl replacement units @ 30%) required provincially, assuming 8 regions 129
No of ambulances (incl replacement units @ 30%) required provincially, assuming 2 regions 123
No of ambulances (incl replacement units @ 30%) required provincially, assuming one (1) region 119
No of ambulances required to be staffed and in operation, assuming 67 independent providers 728,804 staffed unit-hours required annually
No of ambulances required to be staffed and in operation, assuming 20 zones 712,404 staffed unit-hours required annually
No of ambulances required to be staffed and in operation, assuming 8 regions 698,516 staffed unit-hours required annually
No of ambulances required to be staffed and in operation, assuming 2 regions 693,524 staffed unit-hours required annually
No of ambulances required to be staffed and in operation, assuming one (1) region 691,184 staffed unit-hours required annually
Average no of ambulances on task 132,154 staffed unit-hours used annually
Average (Emergent and Non-Emergent) calls assisted 70,997 calls annually

By allowing services to share backup vehicles in the 20 shared coverage areas, it is possible to reduce the fleet size from 171 ambulances to 137. Furthermore, co-ordinating the fleet resources among the eight patient flow patterns would reduce the fleet requirements to 129 ambulances.

Moving from 67 independently operating ambulance services in the core coverage areas to 20 co-ordinated services backing each other up and sharing various components and ultimately associating the shared coverage areas into the eight patient flow patterns allow for additional savings in the number full-time equivalents (FTEs) required to staff the needed ambulance hours. The percentage savings are not nearly as significant as that with the fleet consolidation, but since personnel expenses represent approximately 70 percent of the total EMS and ambulance service costs, minimal percentage savings can

yield significant dollars. The differences between staffing requirements based upon 67, 20, and 8 co-ordinated areas are demonstrated in second series of five lines on the graph in Figure 7.

Finally the two lines on the bottom of the graph identify the average number of ambulances that are actively engaged on a call at any given moment throughout the week. The lower line which represents the number of actual ambulance calls originating during the given time period. Comparing the staffing requirement lines on the graph (the middle series of five lines) with the lower two lines demonstrates the necessary excess capacity required to provide emergency coverage. Depending upon the location and the demand levels of various core coverage areas, a staffed ambulance unit may be productive from as little as 3.3 percent of the time to a little more than 50 percent of the time in major urban areas.

Summary

By developing a centralized dispatch centre to manage emergency call taking and dispatch and to co-ordinate non-emergency transportation services throughout the Province, it is possible to glean significant savings and enhance performance of the Saskatchewan EMS system. Furthermore, creating an infrastructure in which ambulance services located in the core coverage areas can back each other up and share overhead and other expenses enables the system to become more efficient while performing at high levels.

Establishing a provincial fleet can contribute additional savings to the system by reducing the required fleet size by approximately 43 percent from 230 ambulances to 129 ambulances. With the average price of an ambulance being in excess of $100,000, cutting the fleet size by 100 represents $10 million in savings in the acquisition of capital equipment.

Centralizing the non-emergency inter-facility medical transportation activities within the Province can further increase productivity levels and efficiency.

V.
RECOMMENDED SYSTEM IMPROVEMENTS

The culmination of the project team's work has resulted in the identification of twenty-four EMS system improvement opportunities. Some of the recommendations have been previously discussed in regards to how to achieve better value for resources currently being expended on Saskatchewan Emergency Medical Services. Other recommendations are included in this section to improve the performance, quality, and services levels for EMS and medical transportation within the Province.

Recommendation #1

Establish emergency ambulance response time targets.

Defining reasonable expectations for the EMS system's performance includes defining response time targets for emergency ambulance calls. The data analysis accomplished in the project identified reasonable response time expectations for rural and urban areas of the Province. Emergency response time target on a province-wide basis should be *95 percent of the emergency calls responded to within 30 minutes*.

Current response time performance in Saskatchewan's 10 largest cities approaches the recommended target of *90 percent of the emergency calls being responded to within 8 minutes and 59 seconds*. The geographic dispersion of rural Saskatchewan residents presents serious coverage challenges, but an achievable response time target of *30 minutes, 90 percent of the time* for life threatening emergencies is appropriate in these areas.

Recommendation #2

Establish EMT-Basic and Emergency Medical Responder as the minimum ambulance crew staffing level.

The quality and capabilities of personnel arriving on the ambulance to treat EMS patients are as important as the timeliness of response. The international minimum standard for ambulance crew capabilities is that of the EMT-Basic training level. Therefore, it is recommended that at least one member of an ambulance crew be trained and certified at the EMT-Basic level while the second member of the crew must have at least the basic skills and training offered by the Emergency Medical Responder program.

Recommendation #3

Develop plans to increase clinical certification levels of personnel on ambulances to EMT-A/EMT, particularly in the rural and remote areas.

A detailed plan should be established in order to increase the availability of ambulance personnel with advanced skill training. It is extremely valuable for the patients to have access to advanced treatment therapies when long transports are required to the nearest emergency department. Paramedics offer the highest level of skill capability but realistically this level is not achievable throughout the Province. The infrequent number of calls that crewmembers are exposed to in rural and remote Saskatchewan make skill retention an issue. This is particularly true for the more advanced skills that are infrequently provided to EMS patients. For that reason, the paramedic level is not recommended as the predominant certification level in rural and remote Saskatchewan. The EMT-Advanced caregiver can provide the most critically needed advanced treatment such as initiation of I.V.s and advanced airway management.

It is recommended that a plan be developed which will increase the number of EMT-As available within the Province, particularly in rural and remote areas. The plan should result in a significantly increased number of EMT-As being employed within the system within the next four years.

Recommendation #4

Create one central dispatch centre for emergency medical services and medical transportation requests.

One centre is the most cost-effective way to provide province-wide co-ordination and control of emergency medical services and medical transportation activities. One centre also offers the opportunity for the Province to co-ordinate other health service activities and provide an access point to the health care system for patients. A single centre will also facilitate better management of patient movement and admissions throughout the Province. It would provide a single location where discharge planners, nurses, physicians and other health care providers can access transportation and receive assistance in identifying the appropriate patient destinations.

The dispatch centre should be extremely sophisticated with the intensive use of modern technology. The centre should be capable of receiving all 9-1-1 call transfers along with the Automatic Location Identifier (ALI) and Automatic Number Identifier (ANI) from the 9-1-1 public safety answering points. In addition, the centre should have a sophisticated computer aided dispatch system to manage and move ambulance resources, monitor response time performance, and to co-ordinate non-emergency transportation. There should be Automatic Vehicle Locator (AVL) systems to monitor the real time location of all ambulances throughout the Province. Adequate telephone and radio communication

should be in place for the centre to communicate with ambulances, first responders, other public safety agencies, and hospitals.

Recommendation #5

Create a provincial ambulance fleet.

The Province should establish a program for the acquisition, maintenance, and replacement of ambulances. Saskatchewan Health should develop a tender for fleet management.

The tender should include provisions for at least two types of vehicles – high top vans and modular ambulances. The life cycle should be projected at 300,000 kilometres or five years, whichever comes first. The tender would include the cost of acquisition of the vehicles, maintenance of the vehicles, and replacement. It would be beneficial if the bidders were able to provide discounted fuel mechanisms as well.

Each of the services purchasing ambulances should have access to the provincial fleet. While purchasing a vehicle through the fleet should not be mandatory, arrangements should be made that backup and replacement vehicles would be available to those services that do not purchase their vehicle from the provincial fleet process. This would prevent individual services from adding backup units to their own systems losing the financial benefit of a shared backup fleet throughout the Province.

It is recommended that the vehicle purchases be phased in over five years. It is projected that the redesigned Provincial EMS system will require approximately 129 ambulances therefore 25 or 26 ambulances would need to be acquired and put into service each year.

Recommendation #6

Centralize non-emergency, inter-facility transportation services at locations proximal to receiving facilities.

Long distance, non-emergency, inter-facility transports take primary emergency response vehicles out of their service areas. In order to improve emergency response times, it is recommended that responsibility for the non-emergency, inter-facility transportation be provided by services located near the receiving hospitals. This allows the local ambulance to remain available for emergency requests. It also eliminates long waiting times for outlying ambulance crews after they have transferred a patient to a receiving facility. Frequently, there are a number of hours before a patient is fully evaluated and decisions are

made whether to admit or return the patient. Centralizing the non-emergency transportation of inter-facility patients would help reduce this non-productive time.

Since inter-facility, non-emergency transports are not time sensitive and are generally scheduled in advance, it is possible for a centralized service to maximize productivity by scheduling and co-ordinating admissions, discharges, and transportation for diagnostic testing. The centralized dispatch centre discussed in a previous recommendation is essential to co-ordinate the non-emergency transportation components.

Significant efficiencies can be gained by improving co-ordination and provision of the non-emergency inter-facility transfer services within the Province. There are seven communities with primary receiving facilities to which a number of patients are transported over long distances. Long distance was defined in the analysis as greater than 30 minutes, one-way. Co-ordination of these non-emergency, non-time sensitive patient transports will achieve greater coverage in the more remote areas for emergency events by freeing crews that are currently tied up in hours long non-emergency transfers. This co-ordination of the inter-facility transfers can also encourages better scheduling of admissions and discharges so fewer empty ambulances are travelling long distances.

Costing of the program improvements discussed in the next section include the centralization of non-emergency inter-facility transports at the following locations:

- Saskatoon
- Regina
- Yorkton
- Prince Albert
- Moose Jaw
- Swift Current
- North Battleford

Recommendation #7

Integrate air medical services into the EMS and medical transportation system.

Saskatchewan Air Ambulance is believed to be the oldest dedicated air medical transportation service in North America. For 54 years the service has been transporting patients throughout the Province. Air medical transportation is essential in Saskatchewan. Some locations are only accessible by air while other patients must be transported great distances. Many medical conditions require immediate and timely transport of patients to facilities that can treat the patient. Without a solid air medical system this

would be impossible and many patients would not have access to the provincial health care services required by their particular illness or injury.

The demand for air ambulance services has exceeded Saskatchewan Air Ambulance's capacity. Recently an intermediate level air medical service has been established in La Ronge to alleviate some of the demand on the advanced critical care air service provided by Saskatchewan Air Ambulance. This has been very beneficial, particularly in Northeastern Saskatchewan.

It is recommended that the Province work to establish a second intermediate air medical transportation service in the north on the western side of the Province. Having two intermediate air ambulance services within the Province makes it possible for Saskatchewan Air Ambulance to focus its efforts on the most critically ill or injured patients with fewer delays and turn-downs because aircraft is busy on other flights. The two intermediate services will also provide a higher level of patient care since many of the medevacs are on non-dedicated charter flights with limited or no medical expertise.

Saskatchewan Air Ambulance has two older aircraft, which need immediate replacement. The service operates a 1978 Piper Cheyenne II with almost 18,000 hours of flight time on its frame and a 1990 Piper Cheyenne III A with approximately 5,600 hours of flight time on its frame. The 1978 aircraft has more hours on its airframe than any other aircraft of this type in the world. Replacement parts are unavailable or can only be secured with significant delays. A proposal has been forwarded by Saskatchewan Health to upgrade and replace the antiquated aircraft.

It is appropriate to address the issue of initiating a helicopter program in the Province in this recommendation. Frankly, a helicopter-based air medical program cannot be supported within the Province. The high cost of operation and the limited range of helicopters do not provide an appropriate cost benefit for provincial residents. Helicopter programs have an effective range of approximately 120 to 150 kilometres. This limited range and the susceptibility of helicopters to not being able to fly because of poor weather support the concentration of the Province on its fixed-wing air medical program and ground ambulance services rather than investing in helicopter air medical transport.

The use of fixed-wing aircraft requires adequate infrastructure, particularly year-round landing strips. As many as 20 existing landing strips cannot be used by air medical services on a full-time basis as runways are too deteriorated or too short to provide a safe landing environment. The Province should continue to work with municipalities and other stakeholders to improve the number of safe year-round landing strips throughout the Province.

Recommendation #8

Locate ambulances in 67 core coverage areas for emergency response.

The analysis conducted in the project revealed that it is necessary to locate ambulances in 67 core coverage areas in order to achieve the targeted response times. Some of the identified coverage areas have significant demand requiring more than one ambulance to be staffed. For example, Regina and Saskatoon may represent two of the core coverage areas, but each requires more than one ambulance to be staffed at all times in order to achieve appropriate response times and meet demand. Other areas have very low predicted call volumes. In these circumstances, the distance to the potential emergency incidents, the distance to potential destinations (e.g. hospitals), and the distance to return from those incidents or locations were taken into account in determining the number of ambulances required to meet demand in that core coverage area. The core coverage areas are identified on the map in Figure 4 on Page 21.

Recommendation #9

Increase the number of full-time staffed ambulances.

In order to achieve desired response time performance, it is necessary to have full-time staffing on ambulances in the 67 core coverage areas in southern Saskatchewan. This reflects a significant shift from the current operational patterns within the Province where only 14 ambulance services staff units on a full-time basis. Other units are staffed on a part-time, casual, or volunteer basis. In an effort to reduce response times with fewer numbers of ambulances, it is necessary to have each of the vehicles ready to respond at a moment's notice. This can only be achieved with full-time staffing.

An additional benefit to full-time staffing is that it increases career opportunities for emergency medical personnel. There are only a limited number of full-time job positions within the Province for EMS personnel. This has strained the ability of services to retain personnel and to keep them appropriately trained and re-certified. Implementation of full time 24-hour coverage in the 67 core coverage areas will generate an additional 300-350 full-time positions within the Province.

Recommendation #10

Consolidate ambulance services in the South into 20 shared coverage areas.

An independent stand-alone ambulance service with one primary response vehicle is inefficient. EMS systems should be structured in such a way that backup provisions are available for one ambulance to

cover another ambulance's area when that vehicle is out of service or on another assignment, sharing resources such as backup vehicles, and reducing overhead and redundancy within the system. By consolidating services into 20 shared coverage areas it is possible to have units re-deployed to maintain optimal coverage for emergency calls. This is only possible when there is full-time staffing for the ambulance units.

Each shared coverage area identified in Figure 5 on Page 23 has, at a minimum, two core coverage areas, each of which would have full-time ambulance units. It would be possible to share resources such as training courses and continuing education, data processing, administration, and a number of other activities required in high performance ambulance services. Significant savings and quality improvements can be made through this concept of shared coverage areas by consolidating the services within each of the 20 areas.

Recommendation #11

Organise the consolidated shared coverage areas into eight patient flow patterns.

There are eight distinct patient flow patterns that result when the 20 shared coverage areas in southern Saskatchewan are grouped according to actual EMS patient flow patterns. Co-ordination, management, and administration of the EMS system can best be implemented along the lines of these eight patient flow patterns. Since the vast majority of patients are transported within these patterns and those being transported out of the patterns are to common locations, it makes logistical sense to organise the services within these patient flow patterns into discrete EMS subsystems.

The size of the eight zones and the number of services included in each of the patterns allow for systems to be put in place to effectively manage EMS resources, co-ordinate efforts to make improvements, and provide an effective means of funding EMS activities. The eight patient flow patterns are identified in Figure 6 on Page 26.

Recommendation #12

Fund EMS and medical transportation through a single EMS managing health district located in each of the eight patient flow patterns.

Instead of funding EMS or medical transportation through the 32 existing health districts, it is recommended that the funding be amalgamated and disbursed through a single health district within each patient flow pattern. The district identified to receive, dispense, and account for the funds should be

selected based upon capabilities, demonstrated performance in delivery of ambulance services, and willingness to undertake the responsibility for managing emergency medical services and medical transportation within the entire patient flow pattern.

Recommendation #13

Require separate financial accounting of EMS/medical transportation expenditures and revenue from the EMS managing districts and include performance requirements in the agreements with the districts.

At the present time it is difficult to ascertain exactly how dollars are being used in, and are flowing for, EMS and medical transportation within the Province. This is due to a number of factors including, current health district reporting practices and the grant funding mechanism currently in place where lump sums are provided to the health districts for ambulance services and additional funds for emergency enhancement services. In the case of emergency enhancement funds, there has not been a requirement that all of the dollars be allocated directly to ambulance services nor has there been a mechanism to monitor what the districts are receiving in exchange for the funds.

Under the new system structure, a separate accounting of emergency medical service and medical transportation expenses and revenue is required. Along with the discrete accounting of financial activities it is important that Saskatchewan Health develop performance requirements in each of the agreements with the EMS managing districts. These performance requirements should be based upon achieving response time targets, financial accountability, levels of certification of personnel, and the success of the district in implementing the Provincial EMS plan.

The EMS managing district in turn should include specific financial accountability provisions and performance requirements in its agreements and contracts with the ambulance providers. The purpose of the financial and performance accountability requirements is to ensure that the taxpayers' money is being well spent and to direct the development of the Provincial EMS system according to the overall plan.

Recommendation #14

Require EMS managing districts to employ administrators and co-ordinators to oversee EMS and medical transportation services in the eight patient flow patterns.

Improvements in the EMS system and the implementation of a Provincial EMS plan cannot be achieved without dedicated resources. It is also recognized that the responsibilities imposed on each EMS

managing district are substantial and there must be dedicated people responsible for overseeing the provider contracts and service levels, quality of service provided, training of personnel, and implementation of EMS plan components.

Two avenues for providing the appropriate human resources are available. First, the staffing levels of Saskatchewan Health could be increased to accommodate the administration, training, quality improvement, co-ordination, medical direction, and plan implementation for the entire Province. The alternative is providing the EMS managing districts with funding to implement these components within patient flow patterns. In keeping with Saskatchewan Health's divestiture of provider responsibilities, it is recommended that these functions be assigned to the EMS managing districts.

Each EMS managing district should employ one EMS Administrator, one Training/Quality Improvement (QI) Co-ordinator, one Administrative Assistant, and one part-time Medical Director (3.1 FTE). These positions should be non-operational and be dedicated solely to monitoring, facilitating plan implementation, community relations, quality improvement, co-ordination, and overseeing the training components for the patient flow patterns.

The EMS managing districts covering Regina and Saskatoon should have additional personnel and should be responsible for assisting the other districts with secondary flow patterns that transport patients into these tertiary receiving centres. The additional personnel would be the separation of the Training/QI Co-ordinator into two distinct full-time positions; one solely as a training co-ordinator while the other individual would be responsible for quality improvement. An additional administrative assistant is also required in each of these larger patient flow patterns. There would be 5.1 FTE employed in each of these EMS managing districts.

This administrative infrastructure located in each of the patient flow patterns facilitates a number of activities. For example, there would be eight part-time Medical Directors throughout the Province to assist in defining medical protocols and identifying training issues. Eight individuals would be responsible for quality improvement activities to determine the efficacy of treatment and system changes. Eight administrators would be responsible for implementing the EMS plan, working with individual communities in developing community support and identifying resources that could be used to support EMS activities. Part of the administrators' responsibility would be to communicate efforts of the EMS system and demonstrate the benefits achieved through the improvement activities. Locating these personnel structures in the eight patient flow patterns puts the individuals in closer contact with the public they serve as well as the facilities and services with whom they will be working.

Recommendation #15

Fund EMS activities based upon unit hours of coverage provided by ambulance services, according to the overall EMS plan.

The current funding mechanism encourages inefficiencies and has incentives that do not produce the best response times or overall performance within the system. Some services are highly dependent on user fees from long distant transports and in fact some services indicated that a significant portion of their revenue is based upon waiting time spent non-productively at receiving facilities. It is important to understand that the most valuable commodity provided by emergency medical service system is its availability to respond to emergency calls. Therefore, funding should be based on the increased availability of ambulances to respond to emergency calls and its performance regarding response times, not solely based on transporting patients.

One of the other recommendations of this report creating centralized non-emergency transfer services would reduce revenue to some of the most rural services based on the current funding structure. These rural services should not be penalized for a system change to make the non-emergency inter-facility transports more efficient, therefore a different funding mechanism must be employed.

Funding should be largely based on the number of staffed ambulances that need to be deployed throughout the patient flow patterns, shared coverage areas, and core coverage areas. Funds should be transferred to the EMS managing districts as they achieve compliance with the EMS plan and increase full-time staffing throughout the Province. Calculation of the amount of funds to be paid to each ambulance service would be based on a combination of the cost of providing the necessary coverage and adjusted for user fee revenue generated through the service's operation.

Recommendation #16

EMS managing districts should secure agreements with medical taxis.

One of the medical transportation issues that have caused frequent difficulties throughout the Province is the issue with medical taxis. Medical taxis are vans that are frequently used to transport patients for physician appointments, diagnostic testing, dialysis, and for a number of other medical reasons. Medical taxis are essential for many individuals in the Province to receive adequate health care services. There are few, if any, formal arrangements with medical taxis with regard to performance levels, responsiveness, quality of drivers, safety of vehicles, and availability. It is important that this essential means of access be more formalized within the provincial medical transportation system. It is recommended that the EMS managing districts be responsible for securing agreements, identifying minimum levels of performance, and negotiating fees. There should be a reasonable expectation among users of the medical taxis that

there be a minimum level of reliability and quality. This is such an important means for individuals to access health care services that it must be included in the overall EMS/medical transportation scheme for the Province.

Recommendation #17

Improve quality of continuing education courses and quality improvement activities.

It was clearly demonstrated through the EMS Development Project that continuing education programs varied widely as to quality and content. The Province has established basic continuing education requirements in order for personnel to maintain their certification in the Province. While the requirements are in place, monitoring, accountability, and efforts to ensure the quality of the continuing education efforts throughout the Province are not. It is important that all personnel receive high quality and consistent continuing education throughout the Province

Quality improvement efforts are also lacking within the current Provincial EMS system. Quality improvement processes monitor the activity and performance of caregivers and measure patient outcomes. In order to ensure that the clinical protocols are appropriate and have the greatest benefit to the patient, it is necessary to monitor patient outcomes and caregiver compliance with treatment guidelines. This can only be accomplished through a comprehensive quality improvement process that identifies shortcomings within the system, individuals, or other factors and is designed to correct the deficiencies as they are identified. Corrections of deficiencies often are made through modification of clinical protocols and redesign of training programs to achieve more positive results.

The emphasis on improving continuing education consistency and developing comprehensive quality improvement programs were part of the motivation for the identification and employment of specific individuals within the EMS managing districts to develop, implement, and maintain these activities.

Recommendation #18

Consider the results of the job evaluation process being led by SAHO in the future funding requirements in the EMS system.

There is currently a process underway looking at all positions within health services. It is anticipated that part of the results of that process would be the identification of appropriate parity/compensation levels for EMS personnel. The results of the job evaluation process being led by SAHO should be used in determining funding levels for emergency medical services and medical transportation.

Recommendation #19

Establish all-inclusive rates for all ambulance transportation.

There currently is a wide variation of how ambulance services are charged to the users. Base rates range from $95 to $250. The fees charged per kilometre range from $0.75 to $2.25. If a patient is transferred from an outlying area across health district lines to a receiving hospital, the ambulance bills can exceed $1,000 depending on the distance travelled. A similar type of inter-facility transport within a health district frequently is without charge to the patient. This inconsistency demonstrates some fundamental inequities in the way that ambulance services are paid for under the current structure.

Numerous options are available—from the Province paying all or an increasing portion of the medical transportation costs to increasing the user and insurance portions of system funding. The proposed improvements to the EMS system are accompanied by a substantial increase in system costs. In order to maintain the current level of user and insurance company funding to the system, it is recommended that a flat fee methodology be implemented for ambulance transportation. There would be no kilometre charges, only a single all-inclusive fee based upon the type of transportation provided to the individual. The recommended fees that would maintain the current user/insurance company contribution to the EMS system are:

- Emergency requests such as through 9-1-1 $415
- Non-emergency transportation $250
- Inter-facility transportation $170

Using the proposed all-inclusive fees would result in approximately the same amount of money being contributed by users and insurance companies to the EMS system as the current levels. It eliminates the inequity experienced by inter-district transports and the residential location of ambulance service users.

Recommendation #20

Draft appropriate legislation to accommodate changes in the EMS system.

The current Ambulance Act does not allow for effective changes to be made to the EMS system as proposed by this project. It will be necessary to draft amendments to the act that clarifies the goals of the Provincial EMS system, implements the appropriate accountability mechanisms defined in this report, and allows for the smooth transition of the current system into the proposed Provincial EMS system.

Mechanisms that should be included in the legislation are the support of the envisioned funding structure through EMS managing health districts, the creation of mechanisms to allow the districts to enter into

arrangements with ambulance service providers to ensure staffing of ambulance within the core coverage areas, the establishment of an all-inclusive provincial fee structure, and allowing provisions within agreements to mandate performance standards and financial accountability.

Recommendation #21

Designate critical access plan areas in remote southern Saskatchewan and the north and develop integrated EMS plans with other health care providers and community resources to provide essential access to health services.

Even with the proposed staffing of full-time ambulances in the 67 core coverage areas, there will be locations within the Province where prompt access to emergency medical services will be difficult. Specific criteria have been developed to identify Critical Access Plan Areas (CAPA) within the Province. The various labour organisations were asked to respond to criteria in order to demonstrate their willingness to work with other health care providers to establish innovative mechanisms to ensure the availability of emergency medical services.

The criteria for identification of a CAPA include:

- More than 30 minutes from the nearest staffed ambulance;
- More than 30 minutes travel time to the nearest hospital, and;
- Less than one emergency call every three days, on average.

It is recommended that in these areas where access to emergency medical services is impaired, the communities and health care providers look to alternative delivery mechanisms for emergency medical services. These may take the form of integrated positions within clinics, working with local industry to develop ambulance response teams or co-ordination with First Nations to provide emergency medical services. There is no cookie-cutter approach and each area should establish its own CAPA plan based on the unique circumstances and resources available to provide essential access to emergency medical services.

The letters submitted by the various labour organisations in response to the CAPA criteria are included in Attachment E.

Recommendation #22

Encourage the development of additional First Responder Programs.

One very beneficial and cost-effective way to get rapid assistance to patients suffering from medical emergencies is the establishment of widespread medical first responder programs. First responders are active and used in many areas of the Province where these dedicated teams provide life saving treatment to patients prior to the arrival of the ambulance. The Province, EMS managing districts, and ambulance service providers should be encouraged and mandated to expand First Responder coverage within the Province.

First Responders should be provided with adequate training, medical supplies, equipment, and communication capability in order to facilitate their quick response to medical emergencies.

Recommendation #23

Provide Saskatchewan Health with the appropriate resources to implement the EMS plan and provide ongoing monitoring to the system.

Over the period of implementation, Saskatchewan Health will require additional human resources to effect the changes. It is recommended that an additional five full-time equivalent (FTE) incremental positions be in place through the transition period (3 years). Two FTE are needed for development/implementation of accountability, funding, and reporting systems, including one Project Manager and one Accountant/Research position. Another 1.5 FTE would be needed for the development/implementation of the Continuous Quality Improvement (CQI) and training requirements. One FTE would be dedicated towards information technology and another 0.5 FTE for administration and support. This level of staffing would provide the foundation for implementing the system and transitioning from the current organisational structure to the co-ordinated Provincial organisational system outlined in this report.

In addition to the transition personnel requirements it will be necessary to handle other aspects of the implementation through external contract. This is particularly true with the implementation of the Centralized Dispatch Centre. It is likely that this process will take nearly one year and require specific expertise that is not readily available within Saskatchewan Health.

Recommendation #24

Phase in the EMS system improvements over four years.

The phase in process for implementing the EMS system changes should be deliberate, but aggressive. Funds should also be allocated in the first year to acquire the infrastructure and initiate operation of the Centralized Dispatch Centre. Six months of operational funding will be required for the dispatch centre. It is recommended that in the first year the associated costs of establishing the EMS managing districts and the overhead for management of the EMS system be implemented. This includes the district administrative staffing. Approximately one-third of the funding to develop full-time services in core coverage areas should also be allocated to the first year. Other areas that should be funded in the first year include a significant amount for training to upgrade certification levels of personnel. In the first year funds should also be earmarked for: a.) the provision of improved access to emergency medical services in the north, and remote locations in southern Saskatchewan to provide essential access to emergency medical services, b.) incremental personnel for Saskatchewan Health to implement and oversee the project, and c.) funds for external contracts for unique and specialized system implementation such as the dispatch centre.

The second year would see a decrease in the capital requirements for developing the dispatch centre since it would be up and operating; annualization of the operational costs for the dispatch centre would be required. Funding is allocated in the second year to continue expanding 24-hour ambulance coverage.

The third and fourth years would see continued expansion of full-time ambulance services to provide 24-hours, 7 days per week coverage of the specified core coverage areas. The summary of the key recommendations and associated costs are represented on Attachment F.

VI.
FINANCIAL AND STATISTICAL ANALYSIS

This section discusses the financial and statistical analyses conducted during the course of the EMS development project. Supporting documentation is included in the attachments to this report to provide details of the analyses. The first part of this section identifies current funding levels and sources of revenue for emergency medical services. A discussion is then presented regarding how the proposed rates were determined in keeping with the premise of maintaining current levels of user and insurance company funding. Finally, the process used to identify the core coverage areas and to establish the total cost for the proposed system is presented in greater detail in this section.

Funding and Revenue Sources for Emergency Medical Services

Currently, Saskatchewan's emergency medical services (EMS) system receives funding from five sources. These include:

- Provincial government grants to health districts for ambulance services.
- Provincial government grants to health districts for emergency services enhancements.
- Federal government reimbursement (from Health Canada, Medical Services Branch (MSB)) for the estimated full cost of First Nations' EMS and medical transportation services.
- User fees from patients, insurance companies and other federal government reimbursement (eg. Royal Canadian Mounted Police, Veterans Affairs).
- Saskatchewan Senior Citizens' Ambulance Assistance Programs (SCAAP) that limits the financial exposure for seniors to $250 per transport.

The table below identifies the estimated expenditures for emergency medical services and medical transportation for the fiscal year 2000-01.

Table 5: Estimated EMS Funding, Saskatchewan (2000-01)

Funding Source	Estimated Funding Level (Fiscal Year 2000-01)
Provincial Government Ambulance Service Grants	$11.73 million
Provincial Government Emergency Services Enhancement Grants	$ 3.47 million
Medical Services Branch (MSB) (*)	$ 4.02 million
Estimated Patient Fees (*)(**)	$11.29 million
Senior Citizens Ambulance Assistance Program (SCAAP) (*)(**)	$ 2.79 million
Total	$ 33.30 million

* - Amounts are presented net of estimated bad debts (estimated at 5% of total revenues)

** - Estimated total billings for EMS services provided to Saskatchewan patients (other than First Nations' residents, for whom MSB is responsible) in 2000-01 are expected to total $14.82 million. Assuming a 5% estimated bad debt expense, these billings are expected to generate cashflow of $14.08 million comprised as indicated above: $11.29 million (Patients and their insurance companies); $2.79 million (SCAAP)

More detailed information is available in Attachment G regarding the source of emergency medical services and medical transportation funding for 2000-01.

Calculation of Proposed Ambulance Rates

Given the current wide variability of ambulance rates throughout the Province and given the fact that there are instances where some individuals are charged more than $1,000 for an inter-facility transport while others pay nothing for these types of calls, it was decided to look at a rate structure that was based on flat fees where everyone would pay the same amount depending upon the type of transport – regardless of location or distances travelled. Three distinct types of transports were identified:

1. emergency responses to acute medical emergencies,
2. non-emergency or routine medical transports,
3. inter-facility transports (where a patient is moved from one healthcare facility to another).

The most expensive component of emergency medical services is maintaining the availability to respond to emergency calls. Therefore, it is appropriate that the emergency response should have the highest fee. Because non-emergency responses are not as time sensitive and can, therefore, be more effectively co-ordinated and managed, such calls justify a lower fee. Because the fees for the final category of calls – inter-facility transports – are largely influenced by the health system design and the distribution of services necessary for the patient's particular illness or injury, it was decided that this fee should represent a lesser charge. A targeted ratio of 5:3:2 was established to differentiate the charges for emergency, non-emergency, and inter-facility transports, respectively.

Through the Department's EMS database, it was possible to calculate the total amount billed to patients (other than to residents of First Nations[1]) for ambulance transports in fiscal years 1996-97 through 1999-2000. As shown in Attachment H, user fee billings increased from $10.64 million to $13.64 million from 1996-97 to 1999-2000 – an average compounded increase of approximately 8.6% per year. Based on this growth trend, estimated billings to these patients are expected to increase to $14.82 million in 2000-01. Given the targeted fee ratio of 5:3:2 (discussed above) and given the number of emergency transports, non-emergency transports, and inter-facility transports for 1999-2000, an algebraic equation was established to calculate the flat user fees necessary to generate approximately the same amount of money for emergency medical services and medical transportation. The result is presented in the following table. Detailed calculations can be found in Attachment H.

[1] - Payment for EMS services provided to patients of Saskatchewan's First Nations would continue to be the responsibility of the federal government (Medical Services Branch (MSB)). At present, MSB reimburses ambulance service providers on a per-call and per-kilometer basis.

Table 6: Recommended Patient Fee Revenue (2000-01)

PATIENT FEE REVENUE		
Service Level	Proposed Rate	Estimated Total Revenue (2000-01)
Emergency	$415	$8.76 million
Non-Emergency	$250	$2.94 million
Inter-facility	$170	$3.23 million
Total		$14.93 million

While the report recommends the proposed flat fee rate structure, options are available to the Province for altering the user fee funding levels. For example, it is estimated that an increase of $25 on each base rate would generate additional revenues of approximately $1.30 million per year. Alternatively, if it was decided that the proposed flat fee rate structure would be adopted but that inter-facility transports would be provided to patients without any charge, this would require additional provincial funding of $3.23 million annually or could be recouped by increasing the emergency rate to $530 and the non-emergency rate to $320.

Response Time Performance and System Costs

The most complex process of the project was to identify the specific coverage areas required to achieve the designated response time performance and to calculate the total cost of providing full-time ambulance services within these coverage areas. The process consisted of a number of steps that can be grouped in two distinct categories. First, identify the location of the coverage areas to achieve the desired response time performance. Second, determine the number of staffed ambulance hours (unit hours) required to meet the response time performance levels for emergency calls and to handle the demand of the non-emergency transports. The following steps summarize the activities completed in the project. Detailed results of the computer simulations and analyses are included in Attachments J and K.

- Actual data for the last three years of ambulance transports within the Province (i.e. fiscal 1996-97 through fiscal 1998-99, inclusive) were accessed from Saskatchewan Health's ambulance database.
- The data were verified and validated in order to produce accurate results.
- A list of candidate communities was prepared to identify potential foci for core coverage areas. Communities were identified as candidates if they met any of the following criteria:
  - Community was categorized by Stabler and Olfert as a Full Convenience Centre or higher[2];
  - Community was included in Stabler and Olfert's list of the top 45 Minimum Convenience Centres in the Province[2];

[2] - Source: The Changing Role of Rural Communities in an Urbanizing World: Saskatchewan - An Update to 1995, Jack C. Stabler, M. Rose Olfert, Appendix B (pp. 45-56).

- Community is not proximate to (defined as more than 60 minutes travel time from) a community categorized by Stabler and Olfert as a Complete Shopping Centre, Secondary Wholesale-Retail Centre, or Primary Wholesale-Retail Centre[2].
- Community was home to an ambulance provider in the most recent year of data (1998-99).

Based on the application of the above criteria, 193 communities were identified as candidates.

- The call locations for emergency calls over the last three years were linked with travel time data produced by the Province's geographic information system (GIS) in order to estimate travel time based on posted road speeds and existing highway infrastructure.
  - In addition to travel time, allowance was made for *chute time* (the time from dispatch until the ambulance is en-route to the scene).
- The 17 coverage areas with highest demand provided baseline response time performance. The simulation assessed each of the remaining eligible communities one at a time to determine which community would have the greatest impact on reducing the provincial average response time. This community was then selected as a coverage area and added to the initial list of 17 coverage areas.
- Additional coverage areas were added until all 193 coverage areas represented by the eligible communities were selected.
- Attachment I and the resulting graphs (Figures 1-3 on pages 10-12) summarize the results of this process.
- The graphs were examined to determine where an appropriate response time could be achieved and where the addition of further coverage areas would not dramatically improve average response time performance.
- Once the 67 core coverage areas were identified, the database was altered to simulate an ambulance response from a community within each of the core coverage areas.
  - This simulation allowed for the calculation of the time-on-task from the time a call is received until the ambulance is back in service in the core coverage area.
  - The time-on-task is used to determine the amount of resources required to deliver the services by linking the time-on-task with the demand for emergency services based on the time of day and day of week.
- Ultimately, this allowed for the calculation of the number of unit-hours required to meet the emergency response time requirements established for the 67 core coverage areas.
- In order to determine how many unit-hours must be staffed to handle both the emergency and non-emergency call load, it was necessary to add the non-emergency transports to the workload of ambulances within the core coverage areas.
  - This was also done by time of day and day of week in order to ensure that enough vehicles were staffed to meet the total call demand of emergency, non-emergency, and inter-facility transports. The results of this time of day and day of week simulation are presented in Attachment J.
- While the computer simulation and analysis generated several activity-based cost drivers (see Attachment K), the most significant result of this simulation was the identification of the number of required unit-hours necessary to meet demand in each of the core coverage areas. The required unit-hours provide the critical output necessary to determine personnel costs – the single largest cost component, accounting for nearly two-thirds of the estimated total system cost.

The cost of personnel in the proposed system represents approximately 65.3 percent of the total annual operating expenses. Personnel wages were costed at Step 5 of the Saskatchewan Association of Health Organizations (SAHO) / Health Sciences Association of Saskatchewan (HSAS) Agreement for EMTs,

paramedics, and emergency medical dispatchers. An average of wages paid to EMRs was used to estimate their labour costs. Attachments L through P, inclusive, provide detailed information regarding staff mix, salary costs (including relief costs), administrative and operations staffing levels, and employee benefit costs.

A significant portion of the increase in funding (estimated to exceed $4 million) is to bring the compensation for employees of contracted ambulance services in line with the compensation identified in the SAHO/HSAS collective bargaining agreement. The impact of further collective bargaining agreements can be easily calculated using the models developed during the course of this project.

In addition to determining personnel levels and costs, parallel processes were used to calculate the non-salary cost associated with providing emergency medical services and medical transportation.

- First, an estimate of non-salary costs for provincial ambulance services was completed.
  - Twenty-eight separate audited financial statements for the year ended March 31, 1998 were used to identify the key non-salary cost drivers of an ambulance service.
  - Multivariate linear regression analysis identified three important components that impacted non-salary ambulance service costs (Attachment Q). A chart demonstrating the results of the regression analysis is included in Attachment R and identifies that the number of locations, the number of calls, and the number of kilometres are the key cost drivers for non-salary costs.
  - The result of the analysis revealed that, for 2000-01, the provincial ambulance services' non-salary costs could be accurately estimated by adding $28,603 per site, $36.85 per call, and $1.08 per kilometre.
- Secondly, using a line item template and comparing it with the performance of other services in North America corroborated these cost estimates. This line item template can be found in Attachment S.

The final process in the costing exercise involved determining the on-going, annual cost of maintaining a regular replacement schedule for:

- the provincial ambulance fleet (including necessary back-up vehicles and supervisory units),
- the associated on-board medical and communications equipment (including necessary back-up equipment), and
- office and administrative equipment (including necessary back-up equipment).

The following steps were taken to determine these costs:

- A detailed listing of vehicle and capital equipment requirements was developed (Attachment T).
- For each individual asset listed in Attachment T, estimates of the asset's useful life and its total depreciable cost (i.e. estimated purchase price, less estimated salvage value at the end of the asset's useful life) were made.
- The resulting cost and replacement information was then combined with the statistics generated by the computer simulation to create regular replacement schedules.
- The cashflows from the replacement schedules were then discounted using present value analysis and equivalent annual payments were then computed and used in the costing model.

This process resulted in the identification of the cost of the total EMS and medical transportation system if 67 core coverage areas were provided with full-time ambulance staffing. These costs reflected the independent operation of each of these core coverage area services. These results are also included in Attachment K.

Subsequent analyses and simulations were conducted in order to measure the effects of sharing and collaboration between the core coverage areas. The simulation results by time of day and day of week were examined to identify potential savings to the system if the 67 core coverage areas were combined into the 20 shared coverage areas.

Finally, the 20 shared coverage areas were combined into the 8 identified patient flow zones. These simulations allowed the calculation of savings that would result from reductions in overhead, vehicles, duplication, and staffing requirements.

Detailed calculations to support the proposed system costs and the phase-in of system changes are provided in Attachments L through Z.

As previously discussed on page 12 of this report, the dispersal of population in the North, the lack of road infrastructure and the long distances between medical facilities make it impossible to identify viable core coverage areas. Thus, a specific allocation of additional EMS funding is to be used to increase full-time coverage in some areas, but is largely earmarked for setting up integrated EMS delivery arrangements.

VII.
IMPLEMENTATION

A four-year implementation timeline has been identified for upgrading the provincial EMS system. Many of the recommendations should be implemented regardless of decisions requiring additional funding to enhance ambulance services and establish full-time coverage. These include:

- developing a centralized provincial dispatch centre,
- establishing co-ordinated EMS systems in each of the eight patient flow zones,
- developing the recommended funding and accountability structures, and
- initiating the process to increase the level of training and certification of personnel.

Attachment F includes a summary of the implementation priorities and the additional funding required to fully implement the proposed system changes.

Attachment F clearly articulates the priorities for system redesign and the associated incremental funding requirements. First and foremost is the establishment of a single provincial dispatch centre. The one-time investment of $2.7 million is identified as a year one expenditure along with the operational costs anticipated for six-months of operation. The six-month operational costs are estimated at $1.6 million.

Establishing external oversight and the co-ordination function by employing managers, trainers, quality improvement co-ordinators, and support staff in the eight patient flow zones are seen as critical to improving EMS within the Province. Therefore these positions are funded in year one and continue throughout the four-year implementation period.

In year one, additional funding is necessary to ensure that there is some coverage in each of the 67 core coverage areas and that the current pay system is brought up to the level of the collective bargaining agreement. Over $6 million are allocated in year one to ensure coverage and to bring current personnel pay rates to the collective bargaining agreement levels. An additional $4 million are included for enhancing coverage in northern Saskatchewan and remote areas of the south.

Three quarters of a million dollars are allocated in each of the first three years for training, in order to achieve the proposed minimum staffing requirements recommended in this report.

A limited amount of funding is included for establishing a transition team within Saskatchewan Health. Approximately $400,000 is allocated annually for the first three years to facilitate the implementation of the plan and transition. An additional external contract is anticipated during the first year particularly to assist with the establishment of the dispatch and communications centre.

Additional funding is allocated in the second year to establish full-time, 24/7 coverage [Note: The definition of full-time service used in this report is that the staff are paid and on-site 24 hours per day, 7 days per week.] in 20 additional core coverage areas throughout the Province. This brings total funding in the second year for ambulance service coverage improvements to $18 million. Funding in year three will expand full-time coverage to 18 additional core coverage areas and finally year four will complete the establishment of full-time, 24/7 coverage in all 67 core coverage areas.

There are two areas that constrain a more rapid implementation of the proposed system changes. First, the acquisition, equipping, and build-out of the dispatch and communications centre will likely take six to nine months, at a minimum. The second constraint represents the time it takes to train the nearly 400 EMTs, EMT-As, and paramedics required for the full-time staffing of the provincial EMS system.

Full implementation of the proposed EMS systems design changes will allow the Province's EMS and medical transportation system to achieve the proposed response time targets and vastly improve co-ordination and accountability for emergency medical services.

Report Attachments

Saskatchewan EMS Development Project

Date: November 8, 2000

ATTACHMENT A

EMERGENCY MEDICAL SERVICES DEVELOPMENT
TERMS of REFERENCE

Mandate

The purpose of the project is to make recommendations on the design of a provincial emergency medical services system that is client-centred, co-ordinated and ensures the most effective use of available resources.

The following questions will be addressed:

1. How should emergency medical service (EMS) dispatch and response processes be organized to ensure co-ordination among EMS providers (air and ground) and designated emergency sites (hospitals and health centres)?

2. How should the EMS system be structured (e.g. base locations; cost effective models for service delivery for varying call volumes) to ensure consistent and timely response by professional personnel to clients across Saskatchewan? What are the associated costs and the priorities for implementation?

3. Based on the recommended design and cost of the provincial ems system, how will the system be cost shared between the province and users of the system? What is the proposed rate structure for generating the users' portion of the system's cost?

Project Process

The project will be headed by two individuals with expertise in emergency medical services, Dr. Jim Cross and Mr. Rick Keller. Research and analytical support will be provided by Saskatchewan Health.

Consultation will take place with health districts, the Saskatchewan Association of Health Organizations, ambulance service owner/operators, the Saskatchewan Emergency Medical Services Association, professional and regulatory bodies (College of Physicians & Surgeons, Saskatchewan Association of Licensed Practical Nurses, Saskatchewan Medical Association, Saskatchewan Paramedic Association, Saskatchewan Registered Nurses Association, Registered Psychiatric Nurses of Saskatchewan) and unions (Canadian Union of Public Employees, Health Sciences Association of Saskatchewan, Saskatchewan Government Employees Union, Saskatchewan Union of Nurses, Saskatchewan Professional Fire Fighters Association, Service Employees International Union).

Reporting and Timelines

A final report will be provided to the Minister of Health by September 30, 2000.

ATTACHMENT B

EMERGENCY HEALTH SERVICES IN SASKATCHEWAN
KEY ISSUES / CONCERNS

As outlined in the attached cover letter, the Department has initiated an Emergency Health Services Project, the objective of which is to make recommendations on the design of a provincial emergency medical services system that is client-centred, co-ordinated and ensures the most effective use of available resources.

In order to ensure that we begin the project with a complete and shared understanding of the issues associated with the delivery of pre-hospital care in Saskatchewan, we would appreciate your feedback on the following questions. There will be other opportunities for consultation throughout the duration of the project.

1. Please priorize the following issues by ranking their order of importance (1 = highest priority):

   ___ Response time for emergency-type calls (i.e. non-transfer related calls)
   ___ Availability of qualified staff
   ___ Wage equity / parity
   ___ Distribution of Advanced Life Support (ALS) service
   ___ Variations in client charges (between districts)
   ___ Levels of client charges (i.e. amounts paid by users of the road and / or air ambulance system)

2. Please identify any other issues of concern that are not included in the above list and rank their order of importance relative to the rankings you provided in question #1 (i.e. please rank the issues listed in question #1 and those you identify below as one group).

   ___ _____
   ___ _____
   ___ _____
   ___ _____
   ___ _____

Please be prepared to discuss options for addressing the issues identified above at the consultation session you attend.

ATTACHMENT C

Key documents reviewed in the course of the Emergency Medical Services Development Project.

Health Services Utilization and Research Commission. Rural Emergency Medical Services Systems: a Review of the Research and Evaluation Literature. June1997.

Saskatchewan Health. Annual Employers Survey. 1998

Saskatchewan Health. Saskatchewan EHS Emergency Treatment Protocols.

Saskatchewan Health. Ambulance Continuing Education Program.

Stabler Jack C, Olfert M. Rose. The Changing Role of Rural Communities in an Urbanizing World: Saskatchewan – An Update to 1995. 1996

Collective bargaining agreements, in effect at June, 2000:

Saskatchewan Association of Health Organizations and the Canadian Union of Public Employees.

Saskatchewan Association of Health Organizations and the Health Sciences Association of Saskatchewan.

Saskatchewan Association of Health Organizations and the Service Employees International Union.

Saskatchewan Statutes, in effect at June, 2000:

The Ambulance Act.

The Ambulance Regulations.

The Health Districts Act.

The Health Labour Relations Reorganization Act.

The Health Labour Relations Reorganization (Commissioner) Regulations.

The Hospital Standards Act.

The Hospital Standards Regulations.

The Labour Standards Act.

The Labour Standards Regulations.

Saskatchewan Emergency Medical Services (EMS) Development Project

Attachment D

Dispatch Centre Funding Summary

	One Dispatch Centre - 8 seats staffed		Two Dispatch Centres - 9.5 seats staffed		Five Dispatch Centres - 13 seats staffed	
	FTE	Cost	FTE	Cost	FTE	Cost
OPERATING EXPENSES:						
Personnel Salaries	45.19	$1,709,514	56.92	$2,170,747	87.02	$3,367,266
Employee Benefits (@ 17.00%)		$290,617		$369,027		$572,435
Salaries and Benefits		$2,000,131		$2,539,774		$3,939,701
Non-Salary Operating Expenses		$471,400		$701,247		$1,396,341
Capital Replacement		$695,595		$1,125,087		$2,220,039
Total Annual Operating Expenses	45.19	$3,167,127	56.92	$4,366,107	87.02	$7,556,081
CAPITAL COSTS:						
Initial One-Time Capital Equipment Costs		$2,678,300		$4,396,800		$8,882,300

Saskatchewan Emergency Medical Services (EMS) Development Project

Attachment D

Dispatch - Personnel Requirements and Costs

One Dispatch Centre - 8 seats staffed				
Position Description	# of Seats	Total FTEs	Annual Rate	Cost
Director		1.00	$70,000	$70,000
Dispatch Supervisor (Administration 50%)		0.50	$55,000	$27,500
Dispatch Supervisor (Dispatching 50%)		0.50	$55,000	$27,500
Full Time Communications Officers - Regular	7	27.50	$36,631	$1,007,349
Full Time Communications Officers - Relief (@ 20.09%)		5.52	$37,406	$206,630
Peak Time Communications Officers - Regular	1	2.00	$36,631	$73,262
Peak Time Communications Officers - Relief (@ 20.09%)		0.40	$37,406	$15,028
Non-Emergency Schedulers - Regular	1	2.00	$36,631	$73,262
Non-Emergency Schedulers - Relief (@ 20.09%)		0.40	$37,406	$15,028
Dispatchers-in-training - Regular		1.89	$36,631	$69,283
Dispatchers-in-training - Relief (@ 20.09%)		0.38	$37,406	$14,211
Admin Asst.		1.00	$30,000	$30,000
Admin Support		1.00	$27,000	$27,000
Quality/Training Officer		1.00	$47,000	$47,000
Medical Director (Casual)		0.09	$70,000	$6,462
	9	45.19	$37,829	$1,709,514

Saskatchewan Emergency Medical Services (EMS) Development Project

Attachment D

Dispatch - Personnel Requirements and Costs

Two Dispatch Centres - 9.5 seats staffed				
Position Description	# of Seats	Total FTEs	Annual Rate	Cost
Director		2.00	$70,000	$140,000
Dispatch Supervisor (Administration 50%)		0.50	$55,000	$27,500
Dispatch Supervisor (Dispatching 50%)		0.50	$55,000	$27,500
Full Time Communications Officers - Regular	8	31.50	$36,631	$1,153,873
Full Time Communications Officers - Relief (@ 20.09%)		6.33	$37,406	$236,685
Peak Time Communications Officers - Regular	2	4.00	$36,631	$146,524
Peak Time Communications Officers - Relief (@ 20.09%)		0.80	$37,406	$30,055
Non-Emergency Schedulers - Regular	2	2.00	$36,631	$73,262
Non-Emergency Schedulers - Relief (@ 20.09%)		0.40	$37,406	$15,028
Dispatchers-in-training - Regular		2.25	$36,631	$82,479
Dispatchers-in-training - Relief (@ 20.09%)		0.45	$37,406	$16,918
Admin Asst.		2.00	$30,000	$60,000
Admin Support		2.00	$27,000	$54,000
Quality/Training Officer		2.00	$47,000	$94,000
Medical Director (Casual)		0.18	$70,000	$12,923
	12	56.92	$38,136	$2,170,747

Saskatchewan Emergency Medical Services (EMS) Development Project

Attachment D

Dispatch - Personnel Requirements and Costs

Five Dispatch Centres - 13 seats staffed				
Position Description	# of Seats	Total FTEs	Annual Rate	Cost
Director		5.00	$70,000	$350,000
Dispatch Supervisor (Administration 50%)		0.50	$55,000	$27,500
Dispatch Supervisor (Dispatching 50%)		0.50	$55,000	$27,500
Full Time Communications Officers - Regular	12	47.50	$36,631	$1,739,967
Full Time Communications Officers - Relief (@ 20.09%)		9.54	$37,406	$356,907
Peak Time Communications Officers - Regular	1	2.00	$36,631	$73,262
Peak Time Communications Officers - Relief (@ 20.09%)		0.40	$37,406	$15,028
Non-Emergency Schedulers - Regular	2	2.00	$36,631	$73,262
Non-Emergency Schedulers - Relief (@ 20.09%)		0.40	$37,406	$15,028
Dispatchers-in-training - Regular		3.09	$36,631	$113,272
Dispatchers-in-training - Relief (@ 20.09%)		0.62	$37,406	$23,235
Admin Asst.		5.00	$30,000	$150,000
Admin Support		5.00	$27,000	$135,000
Quality Training Officer		5.00	$47,000	$235,000
Medical Director (Casual)		0.46	$70,000	$32,308
	15	87.02	$38,695	$3,367,266

Saskatchewan Emergency Medical Services (EMS) Development Project

Attachment D

Dispatch - Salary Costing - Communications Officers

UNIT-HOURS PER FULL-TIME EQUIVALENT (FTE):

Annual staffed-days per 1 full-time equivalent (FTE)	260.00	
Field hours per day	8.40	
Unit-hours per FTE (before relief)	2,184.00	(A)

Average annual relief (days) required for each FTE:		
Vacation (assume 4 weeks for Regular Staff; 3 weeks for Other)	23.01	
Statutory holidays	13.21	
Training	6.00	
Sick leave (assume only Regular Full-time Staff qualify)	10.00	
Total Relief (days)	52.23	
Field hours per day	8.40	
Relief (field hours) per FTE	438.71	(B)
Relief rate	20.09%	(B/A)

	Relief for:											
Regular	Relief1	Relief2	Relief3	Relief4	Relief5	Relief6	Relief7	Relief8	Relief9	Relief10	Relief11	Relief12
20.00	2.65	0.32	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11.00	1.95	0.23	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5.00	0.88	0.11	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10.00	-	-	-	-	-	-	-	-	-	-	-	-
46.00	5.48	0.65	0.08	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

COST PER FULL-TIME EQUIVALENT (FTE):

NOTE: 1 FTE = 2,184 hours per year.

Effective April 1,2000 - HSAS

	Regular Hourly Rate of Pay (Based on 2,184 paid hours per year)						
	Step 1	Step 2	Step 3	Step 4	Step 5	Step 6	Step 5
E.M.D.	$12.538	$13.293	$14.089	$14.929	$15.823	$16.771	$15.823

Annual Salary Costs (including premium pay) per Regular FTE			
Straight Time based on 2,080 hours (2,184 hours less 104 holiday hours) (A)	Estimated Overtime, Standby, and On-Call Costs (B) = Ave%	Total Annual Salary Costs (including premium pay) (C) = A + B	
$34,557	$2,073	$36,631	

Annual Salary Costs (including premium pay) per Relief FTE				
Straight Time based on 2,080 hours (2,184 hours less 104 holiday hours) (A)	Additional 1/2 time premium paid to relief on stat. Holidays (B)	Sub-Total (C) = A + B	Estimated Overtime, Standby, and On-Call Costs (D) = Ave%	Total Annual Salary Costs (including premium pay) (E) = C + D
$34,557	$731	$35,288	$2,117	$37,406

Saskatchewan Emergency Medical Services (EMS) Development Project

Attachment D

Dispatch - Non-Salary Operating Costs

Description	Notes	One Dispatch Centre	Two Dispatch Centres		Five Dispatch Centres	
		Estimated Annual Costs	Individual Site Cost	Estimated Annaul Costs	Individual Site Cost	Estimated Annaul Costs
Building Rent or Lease		$30,000	$20,000	$40,000	$15,000	$75,000
Telephone System Costs		$28,000	$22,000	$44,000	$22,000	$110,000
Utilities	*Power/Water/Energy*	$20,000	$15,000	$30,000	$15,000	$75,000
Insurance		$5,000	$5,000	$10,000	$5,000	$25,000
Office Operations		$15,000	$10,000	$20,000	$7,500	$37,500
AVL/GPS Operations	*$1,200 annually, per unit*	$177,600	n/a (Per vehicle)	$177,600	n/a (Per vehicle)	$177,600
CAD Operations	*15% of Purchase Price*	$150,000	$150,000	$300,000	$150,000	$750,000
EMPDS Operations	*15% of Purchase Price*	$1,500	$1,500	$3,000	$1,500	$7,500
Pro QA/Aqua Operations	*15% of Purchase Price*	$1,500	$1,500	$3,000	$1,500	$7,500
Computer Maintenance	*15% of Purchase Price*	$4,500	$4,500	$9,000	$4,500	$22,500
Digital Recording Operations	*Including Media*	$2,500	$2,500	$5,000	$2,500	$12,500
Radio Maintenance and Operations		$5,000	$3,000	$6,000	$1,750	$8,750
Miscellaneous Expenses	*Travel/Conferences/Audit*	$10,000	$7,000	$14,000	$4,000	$20,000
Staff Continuing Education/Uniforms		$15,000	$12,000	$24,000	$8,500	$42,500
Interest on Working Capital		$5,800	$3,808	$7,617	$2,527	$12,636
		$471,400	$257,808	$693,217	$241,277	$1,383,986

Saskatchewan Emergency Medical Services (EMS) Development Project

Attachment D

Dispatch Capital Equipment Requirements

Total Consoles Required Currently	9	12	15
Backup Consoles/Future Expansion (Estimated at 30% of current requirement)	3	4	5
TOTAL WORKSTATION CONSOLES REQUIRED	12	16	20

Description	Notes	Useful Life	Replacement Cost/Unit ($ Canadian)	One Dispatch Centre: Total Units Required	One Dispatch Centre: Total Cost ($ Canadian)	Two Dispatch Centres: Total Units Required	Two Dispatch Centres: Total Cost ($ Canadian)	Five Dispatch Centres: Total Units Required	Five Dispatch Centres: Total Cost ($ Canadian)
FleetNet Maestro C-3		5	$50,000	12	$600,000	16	$800,000	20	$1,000,000
EMPDS (e.g. Classen Navigator)		5	$10,000	1	$10,000	2	$20,000	5	$50,000
Aux. Radio Equipment	*Backup/Pagers/Cell Phones*	5	$5,000	1	$5,000	2	$10,000	5	$25,000
CAD Workstations		3	$30,000	12	$360,000	16	$480,000	20	$600,000
Computer Aided Dispatch Sys.		5	$1,000,000	1	$1,000,000	2	$2,000,000	5	$5,000,000
Mapping System	*Geomatics Fabric*	5	$2,000	1	$2,000	1	$2,000	1	$2,000
AVL/GPS Systems (See Table)	*See Table Below*	5	$1,100	148	$162,800	148	$162,800	148	$162,800
Pro QA - Aqua		5	$10,000	1	$10,000	2	$20,000	5	$50,000
Workstation Desks (adjustable)		10	$9,000	12	$108,000	16	$144,000	20	$180,000
Workstation Chairs		5	$1,000	12	$12,000	16	$16,000	20	$20,000
Digital Recording System - Advanced		5	$100,000	1	$100,000				
Digital Recording System - Basic		5	$75,000			2	$150,000	5	$375,000
Call Check Loops		5	$3,125	12	$37,500	16	$50,000	20	$62,500
40 KVA UPS Power Supply		5	$50,000	1	$50,000	2	$100,000	5	$250,000
Electric Generator Backup		20	$100,000	1	$100,000	2	$200,000	5	$500,000
Telephone Systems		5	$30,000	1	$30,000	2	$60,000	5	$150,000
Computer Servers		3	$30,000	1	$30,000	2	$60,000	5	$150,000
Office Furniture		10	$30,000	1	$30,000	2	$60,000	5	$150,000
Office Automation Equipment		5	$30,000	1	$30,000	2	$60,000	5	$150,000
911 Interface (ANI/ALI)		5	$1,000	1	$1,000	2	$2,000	5	$5,000
					$2,678,300		$4,396,800		$8,882,300

Notes:

Does not include building conversion

All Stations are configured for both call taking and dispatch

AVL Capital Scenarios	Units	Breakdown	Ambulances	Supervisory
67 Core Coverage Areas	240	171A & 69S	$188,100	$75,900
20 Shared Coverage Areas	162	137A & 25S	$150,700	$27,500
8 Patient Flow Zones	148	129A & 19S	$144,100	$20,900
2 Zones	139	123A & 16S	$135,300	$17,600
1 Zone	134	119A & 15S	$130,900	$16,500

Saskatchewan Emergency Medical Services (EMS) Development Project

Attachment D

Dispatch - Capital Replacement Schedule - 1 Centre

Required rate of return on investment..... 8.00%

Useful Life	Total Cost ($ Canadian)	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9
1	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
2	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
3	$390,000	$390,000	$0	$0	$390,000	$0	$0	$390,000	$0	$0	$390,000
4	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
5	$2,050,300	$2,050,300	$0	$0	$0	$0	$2,050,300	$0	$0	$0	$0
6	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
7	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
8	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
10	$138,000	$138,000	$0	$0	$0	$0	$0	$0	$0	$0	$0
20	$100,000	$100,000	$0	$0	$0	$0	$0	$0	$0	$0	$0
Cashflow	$2,678,300	$2,678,300	$0	$0	$390,000	$0	$2,050,300	$390,000	$0	$0	$390,000
Present Value (t=0)		$2,678,300	$0	$0	$309,595	$0	$1,395,400	$245,766	$0	$0	$195,097

	Years 0-59, discounted to Year 0	Years 60-119, discounted to Year 60	Years 120-179, discounted to Year 120	Years 180-239, discounted to Year 180	Years 240-299, discounted to Year 240	Years 300-359, discounted to Year 300	Years 360-419, discounted to Year 360	Years 420-479, discounted to Year 420	Years 480-539, discounted to Year 480	Years 540-599, discounted to Year 540
Present Value (Yrs 0-59)	$8,609,070	$8,609,070	$8,609,070	$8,609,070	$8,609,070	$8,609,070	$8,609,070	$8,609,070	$8,609,070	$8,609,070
Present Value (t=0)...	$8,609,070	$85,022	$840	$8	$0	$0	$0	$0	$0	$0

Saskatchewan Emergency Medical Services (EMS) Development Project

Attachment D

Dispatch - Capital Replacement Schedule - 1 Centre

Useful Life	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16	Year 17	Year 18	Year 19	Year 20	Year 21	Year 22
1	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
2	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
3	$0	$0	$390,000	$0	$0	$390,000	$0	$0	$390,000	$0	$0	$390,000	$0
4	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
5	$2,050,300	$0	$0	$0	$0	$2,050,300	$0	$0	$0	$0	$2,050,300	$0	$0
6	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
7	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
8	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
10	$138,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$138,000	$0	$0
20	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$100,000	$0	$0
Cashflow	$2,188,300	$0	$390,000	$0	$0	$2,440,300	$0	$0	$390,000	$0	$2,288,300	$390,000	$0
Present Value	$1,013,606	$0	$154,874	$0	$0	$769,284	$0	$0	$97,597	$0	$490,951	$77,476	$0

Years 600-659, discounted to Year 600	Years 660-719, discounted to Year 660	Years 720-779, discounted to Year 720	Years 780-839, discounted to Year 780	Years 840-899, discounted to Year 840	Years 900-959, discounted to Year 900	TOTAL
$8,609,070	$8,609,070	$8,609,070	$8,609,070	$8,609,070	$8,609,070	$137,745,127
$0	$0	$0	$0	$0	$0	$8,694,940

Total Annual Return Required.....	$695,595
Annual Depreciation.....	$558,860
Net income (before interest).....	$136,735

Saskatchewan Emergency Medical Services (EMS) Development Project

Attachment D

Dispatch - Capital Replacement Schedule - 1 Centre

Useful Life	Year 23	Year 24	Year 25	Year 26	Year 27	Year 28	Year 29	Year 30	Year 31	Year 32	Year 33	Year 34	Year 35
1	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
2	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
3	$0	$390,000	$0	$0	$390,000	$0	$0	$390,000	$0	$0	$390,000	$0	$0
4	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
5	$0	$0	$2,050,300	$0	$0	$0	$0	$2,050,300	$0	$0	$0	$0	$2,050,300
6	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
7	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
8	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
10	$0	$0	$0	$0	$0	$0	$0	$138,000	$0	$0	$0	$0	$0
20	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Cashflow	$0	$390,000	$2,050,300	$0	$390,000	$0	$0	$2,578,300	$0	$0	$390,000	$0	$2,050,300
Present Value	$0	$61,503	$299,381	$0	$48,823	$0	$0	$256,225	$0	$0	$30,767	$0	$138,671

Saskatchewan Emergency Medical Services (EMS) Development Project

Attachment D

Dispatch - Capital Replacement Schedule - 1 Centre

Useful Life	Year 36	Year 37	Year 38	Year 39	Year 40	Year 41	Year 42	Year 43	Year 44	Year 45	Year 46	Year 47	Year 48
1	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
2	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
3	$390,000	$0	$0	$390,000	$0	$0	$390,000	$0	$0	$390,000	$0	$0	$390,000
4	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
5	$0	$0	$0	$0	$2,050,300	$0	$0	$0	$0	$2,050,300	$0	$0	$0
6	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
7	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
8	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
10	$0	$0	$0	$0	$138,000	$0	$0	$0	$0	$0	$0	$0	$0
20	$0	$0	$0	$0	$100,000	$0	$0	$0	$0	$0	$0	$0	$0
Cashflow	$390,000	$0	$0	$390,000	$2,288,300	$0	$390,000	$0	$0	$2,440,300	$0	$0	$390,000
Present Value	$24,424	$0	$0	$19,388	$105,333	$0	$15,391	$0	$0	$76,449	$0	$0	$9,699

Saskatchewan Emergency Medical Services (EMS) Development Project

Attachment D

Dispatch - Capital Replacement Schedule - 1 Centre

Useful Life	Year 49	Year 50	Year 51	Year 52	Year 53	Year 54	Year 55	Year 56	Year 57	Year 58	Year 59	TOTAL (Years 0-59)
1	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
2	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
3	$0	$0	$390,000	$0	$0	$390,000	$0	$0	$390,000	$0	$0	$7,800,000
4	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
5	$0	$2,050,300	$0	$0	$0	$0	$2,050,300	$0	$0	$0	$0	$24,603,600
6	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
7	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
8	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
10	$0	$138,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$828,000
20	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$300,000
Cashflow	$0	$2,188,300	$390,000	$0	$0	$390,000	$2,050,300	$0	$390,000	$0	$0	$33,531,600
Present Value	$0	$46,657	$7,699	$0	$0	$6,112	$29,752	$0	$4,852	$0	$0	$8,609,070

Saskatchewan Emergency Medical Services (EMS) Development Project

Attachment D

Dispatch - Capital Replacement Schedule - 2 Centres

Required rate of return on investment..... 8.00%

Useful Life	Total Cost ($ Canadian)	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
1	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
2	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
3	$540,000	$540,000	$0	$0	$540,000	$0	$0	$540,000	$0	$0	$540,000	$0
4	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
5	$3,452,800	$3,452,800	$0	$0	$0	$0	$3,452,800	$0	$0	$0	$0	$3,452,800
6	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
7	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
8	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
10	$204,000	$204,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$204,000
20	$200,000	$200,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Cashflow	$4,396,800	$4,396,800	$0	$0	$540,000	$0	$3,452,800	$540,000	$0	$0	$540,000	$3,656,800
Present Value (t=0)		$4,396,800	$0	$0	$428,669	$0	$2,349,918	$340,292	$0	$0	$270,134	$1,693,806

	Years 0-59, discounted to Year 0	Years 60-119, discounted to Year 60	Years 120-179, discounted to Year 120	Years 180-239, discounted to Year 180	Years 240-299, discounted to Year 240	Years 300-359, discounted to Year 300	Years 360-419, discounted to Year 360	Years 420-479, discounted to Year 420	Years 480-539, discounted to Year 480	Years 540-599, discounted to Year 540	Years 600-659, discounted to Year 600
Present Value (Yrs 0-59)	$13,924,693	$13,924,693	$13,924,693	$13,924,693	$13,924,693	$13,924,693	$13,924,693	$13,924,693	$13,924,693	$13,924,693	$13,924,693
Present Value (t=0)...	$13,924,693	$137,518	$1,358	$13	$0	$0	$0	$0	$0	$0	$0

Saskatchewan Emergency Medical Services (EMS) Development Project

Attachment D

Dispatch - Capital Replacement Schedule - 2 Centres

Useful Life	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16	Year 17	Year 18	Year 19	Year 20	Year 21	Year 22	Year 23
1	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
2	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
3	$0	$540,000	$0	$0	$540,000	$0	$0	$540,000	$0	$0	$540,000	$0	$0
4	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
5	$0	$0	$0	$0	$3,452,800	$0	$0	$0	$0	$3,452,800	$0	$0	$0
6	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
7	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
8	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
10	$0	$0	$0	$0	$0	$0	$0	$0	$0	$204,000	$0	$0	$0
20	$0	$0	$0	$0	$0	$0	$0	$0	$0	$200,000	$0	$0	$0
Cashflow	$0	$540,000	$0	$0	$3,992,800	$0	$0	$540,000	$0	$3,856,800	$540,000	$0	$0
Present Value	$0	$214,441	$0	$0	$1,258,697	$0	$0	$135,134	$0	$827,470	$107,274	$0	$0

Years 660-719, discounted to Year 660	Years 720-779, discounted to Year 720	Years 780-839, discounted to Year 780	Years 840-899, discounted to Year 840	Years 900-959, discounted to Year 900	TOTAL
$13,924,693	$13,924,693	$13,924,693	$13,924,693	$13,924,693	$222,795,082
$0	$0	$0	$0	$0	$14,063,583

Total Annual Return Required.....	$1,125,087
Annual Depreciation.....	$900,960
Net income (before interest).....	$224,127

Saskatchewan Emergency Medical Services (EMS) Development Project

Attachment D

Dispatch - Capital Replacement Schedule - 2 Centres

Useful Life	Year 24	Year 25	Year 26	Year 27	Year 28	Year 29	Year 30	Year 31	Year 32	Year 33	Year 34	Year 35	Year 36
1	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
2	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
3	$540,000	$0	$0	$540,000	$0	$0	$540,000	$0	$0	$540,000	$0	$0	$540,000
4	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
5	$0	$3,452,800	$0	$0	$0	$0	$3,452,800	$0	$0	$0	$0	$3,452,800	$0
6	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
7	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
8	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
10	$0	$0	$0	$0	$0	$0	$204,000	$0	$0	$0	$0	$0	$0
20	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Cashflow	$540,000	$3,452,800	$0	$540,000	$0	$0	$4,196,800	$0	$0	$540,000	$0	$3,452,800	$540,000
Present Value	$85,158	$504,171	$0	$67,601	$0	$0	$417,067	$0	$0	$42,600	$0	$233,529	$33,817

Saskatchewan Emergency Medical Services (EMS) Development Project

Attachment D

Dispatch - Capital Replacement Schedule - 2 Centres

Useful Life	Year 37	Year 38	Year 39	Year 40	Year 41	Year 42	Year 43	Year 44	Year 45	Year 46	Year 47	Year 48	Year 49
1	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
2	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
3	$0	$0	$540,000	$0	$0	$540,000	$0	$0	$540,000	$0	$0	$540,000	$0
4	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
5	$0	$0	$0	$3,452,800	$0	$0	$0	$0	$3,452,800	$0	$0	$0	$0
6	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
7	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
8	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
10	$0	$0	$0	$204,000	$0	$0	$0	$0	$0	$0	$0	$0	$0
20	$0	$0	$0	$200,000	$0	$0	$0	$0	$0	$0	$0	$0	$0
Cashflow	$0	$0	$540,000	$3,856,800	$0	$540,000	$0	$0	$3,992,800	$0	$0	$540,000	$0
Present Value	$0	$0	$26,845	$177,532	$0	$21,311	$0	$0	$125,086	$0	$0	$13,429	$0

Saskatchewan Emergency Medical Services (EMS) Development Project

Attachment D

Dispatch - Capital Replacement Schedule - 2 Centres

Useful Life	Year 50	Year 51	Year 52	Year 53	Year 54	Year 55	Year 56	Year 57	Year 58	Year 59	TOTAL (Years 0-59)
1	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
2	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
3	$0	$540,000	$0	$0	$540,000	$0	$0	$540,000	$0	$0	$10,800,000
4	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
5	$3,452,800	$0	$0	$0	$0	$3,452,800	$0	$0	$0	$0	$41,433,600
6	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
7	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
8	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
10	$204,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$1,224,000
20	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$600,000
Cashflow	$3,656,800	$540,000	$0	$0	$540,000	$3,452,800	$0	$540,000	$0	$0	$54,057,600
Present Value	$77,967	$10,661	$0	$0	$8,463	$50,103	$0	$6,718	$0	$0	$13,924,693

Saskatchewan Emergency Medical Services (EMS) Development Project

Attachment D

Dispatch - Capital Replacement Schedule - 5 Centres

Required rate of return on investment..... 8.00%

Useful Life	Total Cost ($ Canadian)	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
1	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
2	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
3	$750,000	$750,000	$0	$0	$750,000	$0	$0	$750,000	$0	$0	$750,000	$0
4	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
5	$7,302,300	$7,302,300	$0	$0	$0	$0	$7,302,300	$0	$0	$0	$0	$7,302,300
6	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
7	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
8	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
10	$330,000	$330,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$330,000
20	$500,000	$500,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Cashflow	$8,882,300	$8,882,300	$0	$0	$750,000	$0	$7,302,300	$750,000	$0	$0	$750,000	$7,632,300
Present Value (t=0)		$8,882,300	$0	$0	$595,374	$0	$4,969,823	$472,627	$0	$0	$375,187	$3,535,232

	Years 0-59, discounted to Year 0	Years 60-119, discounted to Year 60	Years 120-179, discounted to Year 120	Years 180-239, discounted to Year 180	Years 240-299, discounted to Year 240	Years 300-359, discounted to Year 300	Years 360-419, discounted to Year 360	Years 420-479, discounted to Year 420	Years 480-539, discounted to Year 480	Years 540-599, discounted to Year 540	Years 600-659, discounted to Year 600
Present Value (Yrs 0-59)	$27,476,429	$27,476,429	$27,476,429	$27,476,429	$27,476,429	$27,476,429	$27,476,429	$27,476,429	$27,476,429	$27,476,429	$27,476,429
Present Value (t=0)...	$27,476,429	$271,353	$2,680	$26	$0	$0	$0	$0	$0	$0	$0

Saskatchewan Emergency Medical Services (EMS) Development Project

Attachment D

Dispatch - Capital Replacement Schedule - 5 Centres

Useful Life	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16	Year 17	Year 18	Year 19	Year 20	Year 21	Year 22	Year 23
1	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
2	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
3	$0	$750,000	$0	$0	$750,000	$0	$0	$750,000	$0	$0	$750,000	$0	$0
4	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
5	$0	$0	$0	$0	$7,302,300	$0	$0	$0	$0	$7,302,300	$0	$0	$0
6	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
7	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
8	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
10	$0	$0	$0	$0	$0	$0	$0	$0	$0	$330,000	$0	$0	$0
20	$0	$0	$0	$0	$0	$0	$0	$0	$0	$500,000	$0	$0	$0
Cashflow	$0	$750,000	$0	$0	$8,052,300	$0	$0	$750,000	$0	$8,132,300	$750,000	$0	$0
Present Value	$0	$297,835	$0	$0	$2,538,421	$0	$0	$187,687	$0	$1,744,770	$148,992	$0	$0

Years 660-719, discounted to Year 660	Years 720-779, discounted to Year 720	Years 780-839, discounted to Year 780	Years 840-899, discounted to Year 840	Years 900-959, discounted to Year 900
$27,476,429	$27,476,429	$27,476,429	$27,476,429	$27,476,429
$0	$0	$0	$0	$0

TOTAL
$439,622,871
$27,750,489

Total Annual Return Required.....	$2,220,039
Annual Depreciation.....	$1,768,460
Net income (before interest).....	$451,579

Saskatchewan Emergency Medical Services (EMS) Development Project

Attachment D

Dispatch - Capital Replacement Schedule - 5 Centres

Useful Life	Year 24	Year 25	Year 26	Year 27	Year 28	Year 29	Year 30	Year 31	Year 32	Year 33	Year 34	Year 35	Year 36
1	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
2	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
3	$750,000	$0	$0	$750,000	$0	$0	$750,000	$0	$0	$750,000	$0	$0	$750,000
4	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
5	$0	$7,302,300	$0	$0	$0	$0	$7,302,300	$0	$0	$0	$0	$7,302,300	$0
6	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
7	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
8	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
10	$0	$0	$0	$0	$0	$0	$330,000	$0	$0	$0	$0	$0	$0
20	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Cashflow	$750,000	$7,302,300	$0	$750,000	$0	$0	$8,382,300	$0	$0	$750,000	$0	$7,302,300	$750,000
Present Value	$118,275	$1,066,267	$0	$93,890	$0	$0	$833,011	$0	$0	$59,167	$0	$493,888	$46,968

Saskatchewan Emergency Medical Services (EMS) Development Project

Attachment D

Dispatch - Capital Replacement Schedule - 5 Centres

Useful Life	Year 37	Year 38	Year 39	Year 40	Year 41	Year 42	Year 43	Year 44	Year 45	Year 46	Year 47	Year 48	Year 49
1	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
2	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
3	$0	$0	$750,000	$0	$0	$750,000	$0	$0	$750,000	$0	$0	$750,000	$0
4	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
5	$0	$0	$0	$7,302,300	$0	$0	$0	$0	$7,302,300	$0	$0	$0	$0
6	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
7	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
8	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
10	$0	$0	$0	$330,000	$0	$0	$0	$0	$0	$0	$0	$0	$0
20	$0	$0	$0	$500,000	$0	$0	$0	$0	$0	$0	$0	$0	$0
Cashflow	$0	$0	$750,000	$8,132,300	$0	$750,000	$0	$0	$8,052,300	$0	$0	$750,000	$0
Present Value	$0	$0	$37,285	$374,337	$0	$29,598	$0	$0	$252,261	$0	$0	$18,652	$0

Saskatchewan Emergency Medical Services (EMS) Development Project

Attachment D

Dispatch - Capital Replacement Schedule - 5 Centres

Useful Life	Year 50	Year 51	Year 52	Year 53	Year 54	Year 55	Year 56	Year 57	Year 58	Year 59	TOTAL (Years 0-59)
1	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
2	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
3	$0	$750,000	$0	$0	$750,000	$0	$0	$750,000	$0	$0	$15,000,000
4	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
5	$7,302,300	$0	$0	$0	$0	$7,302,300	$0	$0	$0	$0	$87,627,600
6	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
7	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
8	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
10	$330,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$1,980,000
20	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$1,500,000
Cashflow	$7,632,300	$750,000	$0	$0	$750,000	$7,302,300	$0	$750,000	$0	$0	$106,107,600
Present Value	$162,730	$14,806	$0	$0	$11,754	$105,963	$0	$9,331	$0	$0	$27,476,429

ATTACHMENT E

September 1, 2000

Dear :

RE: EMS Development Project

We want to thank you again for taking the time to meet with us recently.

During our meeting, we had discussed that we had undertaken an extensive analysis of call volume, geography and the current constraints of the Saskatchewan EMS and road ambulance system. This analysis reveals areas of the province where access to emergency care is impaired. We have designated these locations as Critical Access Plan Areas (CAPA).

It is our intention to develop alternative EMS delivery options for these unique areas of critical need, otherwise the residents in these areas will not receive timely help in medical crises and their access to basic health care services will be limited.

The alternative delivery options for the CAPA are likely to include integration of personnel among various health care and non-health care services. Implementation of integrated service options will entail personnel from different trades, professions and unions working together to fulfil basic emergency health care needs in the most isolated areas of the province.

As the co-leaders of the EMS Development Project, we have briefed most of the labour organizations and professional associations that may need to collaborate in order to implement the Critical Access Plans. As part of the briefing process the labour organizations were asked, and they agreed to review the criteria for identifying the Critical Access Plans Areas.

The proposed criteria are:

1) The area must be at least 30 minutes travel time from the nearest hospital.

2) The area must be at least 30 minutes travel time from the nearest ambulance site.

3) The area must be expected to generate, on average, fewer than one emergency ambulance transport every three days.

. . ./2

We also discussed the many unique issues in attempting to provide timely emergency medical services in northern Saskatchewan. We are therefore also proposing that the areas encompassed by the Athabasca Health Authority, Keewatin Yathe Health District and the Mamawetan Churchill River Health District, be designated CAPA, in their entirety.

As the project co-leaders, we respectfully request that each labour organization provide input on the designation criteria for the Critical Access Plan Areas. We also request that each group define its position on its willingness to work with Saskatchewan Health, local healthcare providers and other labour organizations to develop alternative methods to ensure delivery of essential emergency medical services in the underserved areas of the province.

Due to the tight timelines of the project, the co-leaders will need to receive responses by 22 September 2000. They can be mailed to:

Ms Lisa Desjarlais
Acute and Emergency Services Branch
Saskatchewan Health
1st Floor East, 3475 Albert Street
Regina SK S4S 6X6

Or faxed: (306) 787-6113

We are very appreciative of your time and input on this project as we recognize the essential role of your members in ensuring provision of health care services in the province.

Sincerely,

Rick Keller
EMS Project Co-Leader

Dr. Jim Cross
EMS Project Co-Leader

ATTACHMENT E

In response to the September 1, 2000 letter, letters were received from:

Canadian Union of Public Employees
Service Employees International Union
Saskatchewan Government Employees' Union
Saskatchewan Professional Fire Fighters Association
Saskatchewan Union of Nurses.

Saskatchewan Emergency Medical System (EMS) Development Project

Attachment F

Key Report Recommendations and Associated Costs

Key Report Recommendations, in order of implementation priority	Incremental Funding Requirment (Relative to 2000-01 Funding) (Note 3)			
	Year 1 (2001-02)	Year 2 (2002-03)	Year 3 (2003-04)	Year 4 (2004-05)
1. ESTABLISH A SINGLE PROVINCIAL DISPATCH CENTER				
1a. One-time Capital Costs (Note 1)	$2,678,300	$0	$0	$0
1b. Operating Costs				
Six months of operation (Note 1)	$1,583,563			
Full year of operation (Note 1)		$3,167,127	$3,167,127	$3,167,127
2. ENHANCE AND IMPROVE GROUND AMBULANCE SERVICES				
2a. Establish External Oversight And Co-Ordination Function	$1,534,680	$1,534,680	$1,534,680	$1,534,680
2b. Establish Administrative and Operations Personnel in each of the Eight (8) Patient Flow Zones *NOTE: No incremental cost expected. Arrangement expected to consolidate and reduce existing administrative and operations personnel.*	$0	$0	$0	$0
2c. Establish Standardized Ambulance Fees across the province (see Note 2) Recommended fees: Emergent - $415 per call Non-Emergent - $250 per call Inter-facility transfers - $170 per call	$0	$0	$0	$0
2d. Year 1 - Provide incremental funding necessary to allow (i) ensure that there is some coverage in each of the 67 core coverage areas (NOTE: Currently, 4 of the 67 core coverage areas have no provider in their areas), and (ii) the current system to pay the necessary collective agreement costs and to operate at an efficient level *NOTE: In the southern portion of the province, 12 of the 67 core coverage areas currently have full-time 24/7 coverage. This will be unchanged for 2001-02.*	$10,792,492			
2e. Year 2 - Provide incremental funding necessary to establish full-time 24/7 coverage in 20 additional core coverage areas. *NOTE: By the end of Year 2 (2002-03), 32 of the 67 core coverage areas will have full-time 24/7 coverage. With this coverage, each of the 20 shared coverage areas will have full-time 24/7 coverage in at least one core coverage area.*		$18,005,954		
2f. Year 3 - Provide incremental funding necessary to establish full-time 24/7 coverage in 18 additional core coverage areas. *NOTE: By the end of Year 3 (2003-04), 50 of the 67 core coverage areas will have full-time 24/7 coverage.*			$24,028,120	
2g. Year 4 - Provide incremental funding necessary to establish full-time 24/7 coverage in 17 additional core coverage areas. *NOTE: By the end of Year 4 (2004-05), each of the 67 core coverage areas will have full-time 24/7 coverage.*				$28,413,729
2h. Train an estimated 396 students as EMT's, EMT-A's, and EMT-P's Estimated distribution, by type of student: EMT-P.....10 students EMT-A.....45 students EMT.....341 students *NOTE: Excludes costs associated with (a) paid education leaves and (b) the back-fill of current staff who choose to upgrade their training.*	$726,000	$726,000	$726,000	$0
3. IMPLEMENTATION AND TRANSITION COSTS				
3a. Saskatchewan Health - Incremental 5.0 FTE	$369,299	$369,299	$369,299	$0
3b. External Contract	$200,000	$0	$0	$0
ALL KEY RECOMMENDATIONS.....	$17,884,335	$23,803,059	$29,825,225	$33,115,536

Note 1 - The estimated costs of implementing two (2) dispatch centres are as follows:
One-time capital costs.....$4.40 million
Six months of operating costs.....$2.18 million
Full year of operating costs.....$4.37 million

Note 2 - Implementation of the recommended rates (above) *may have a* potential impact on Saskatchewan Health's SCAAP and Supplementary Health programs

Note 3 - All dollar amounts are presented in constant (2000-01) dollars

Saskatchewan Emergency Medical Services (EMS) Development Project

Attachment G

Estimated 2000-01 EMS Expenses

Total 2000-01 Provincial Government Grants:			
Southern Saskatchewan *(includes $3,476,293 of 'Emergency Services Enhancement' Funding)*		$14,671,092	
Northern Saskatchewan		$532,608	$15,203,700

Total Estimated 2000-01 Patient Fees (NOTE: Includes Northern Sask.)	Non Medical Services Branch (MSB) Clients	Medical Services Branch (MSB) Clients	
Actual 1999-2000 Fee Revenue	$13,641,825	$4,071,513	
Estimated fee increases over 1999-2000 (based on average increase from 1996-97 to 1999-2000)	8.62%	4.01%	
Estimated 2000-01 Fee Revenue	$14,817,981	$4,234,945	
Less: 5% bad debt expense	($740,899)	($211,747)	
	$14,077,082	$4,023,197	$18,100,279

Estimated 2000-01 EMS Expenses		$33,303,979

PROVINCIAL GOVERNMENT GRANTS:		
Ambulance Service Grants	$11,727,407	
Emergency Services Enhancement Grants	$3,476,293	$15,203,700
CLIENT REVENUES:		
Senior Citizens' Ambulance Assistance Program (Based on 1999-2000 actuals)	$2,788,342	
Medical Services Branch (MSB) (1999-2000 actuals, net of bad debts)	$4,023,197	
User fees from patients and insurance companies (2000-01 estimate, net of bad debts)	$11,288,741	$18,100,279
Estimated 2000-01 EMS Expenses		$33,303,979

Saskatchewan Emergency Medical Services (EMS) Development Project

Attachment H

Recommended Fee Structure - Assumes Fee for All Calls, including Inter-facility Transfers (IFTs)

Billable	Y

Medical Services Branch (MSB)	IFT	Emergent	96-97	97-98	98-99	99-00
N	N	Y	20,788	21,034	20,218	21,110
		N	11,551	11,509	10,963	11,781
	N Total		32,339	32,543	31,181	32,891
	Y	Y	6,179	6,412	6,024	6,365
		N	12,987	13,190	13,061	12,622
	Y Total		19,166	19,602	19,085	18,987
N Total			51,505	52,145	50,266	51,878
Y	N	Y	6,387	6,548	6,527	7,048
		N	3,847	3,761	3,780	4,056
	N Total		10,234	10,309	10,307	11,104
	Y	Y	890	895	787	806
		N	958	1,118	1,256	1,270
	Y Total		1,848	2,013	2,043	2,076
Y Total			12,082	12,322	12,350	13,180
Grand Total			63,587	64,467	62,616	65,058

	96-97	97-98	98-99	99-00
NON-MSB:				
Emergent	20,788	21,034	20,218	21,110
Non-Emergent	11,551	11,509	10,963	11,781
Inter-facility Transfers	19,166	19,602	19,085	18,987
	51,505	52,145	50,266	51,878
MSB	12,082	12,322	12,350	13,180
Total Billable Calls	63,587	64,467	62,616	65,058

Billable	Y

Medical Services Branch (MSB)	IFT	Emergent	96-97	97-98	98-99	99-00
N	N	Y	$3,167,797	$3,293,017	$3,354,492	$4,156,211
		N	$1,803,876	$1,846,185	$1,866,612	$2,309,498
	N Total		$4,971,672	$5,139,202	$5,221,104	$6,465,708
	Y	Y	$2,358,414	$2,585,783	$2,550,752	$2,937,385
		N	$3,314,351	$3,642,249	$3,818,704	$4,238,731
	Y Total		$5,672,765	$6,228,032	$6,369,456	$7,176,116
N Total			$10,644,438	$11,367,234	$11,590,560	$13,641,825
Y	N	Y	$1,479,155	$1,528,331	$1,529,785	$1,751,433
		N	$883,495	$838,860	$854,097	$941,100
	N Total		$2,362,650	$2,367,191	$2,383,882	$2,692,533
	Y	Y	$677,518	$701,419	$625,808	$619,103
		N	$577,929	$641,423	$756,531	$759,877
	Y Total		$1,255,447	$1,342,842	$1,382,339	$1,378,980
Y Total			$3,618,097	$3,710,033	$3,766,221	$4,071,513
Grand Total			$14,262,535	$15,077,267	$15,356,781	$17,713,338

	96-97	97-98	98-99	99-00
Initial Target Patient Fee Ratio				
$500	$3,167,797	$3,293,017	$3,354,492	$4,156,211
$300	$1,803,876	$1,846,185	$1,866,612	$2,309,498
$200	$5,672,765	$6,228,032	$6,369,456	$7,176,116
NOTE: Total Non-MSB revenues increasing 8.62%/yr...	$10,644,438	$11,367,234	$11,590,560	$13,641,825
NOTE: Total MSB revenues increasing 4.01%/yr.....	$3,618,097	$3,710,033	$3,766,221	$4,071,513
	$14,262,535	$15,077,267	$15,356,781	$17,713,338
Assume 2000-01 Revenue is 8.62% higher than 1999-2000 revenues.....				$14,817,981
Expected Revenue with Target Patient Ratio.....	$17,692,500	$17,890,100	$17,214,900	$17,886,700

Adjusted Patient Fees	Final Recommended Patient Fees
$414.22	$415
$248.53	$250
$165.69	$170

Expected Revenue with Final Recommended Patient Fees	$14,772,990	$14,938,700	$14,375,670	$14,933,690

Expected Revenue Generated by Non-MSB Clients Consists of:

Emergent.....	$8,760,650
Non-Emergent.....	$2,945,250
Inter-facility transfers (NOTE: In 1999-2000, fee revenue generated by IFT's to non-MSB clients was $7.18 million (see above))....	$3,227,790
	$14,933,690

Definitions:

Emergent - Calls were defined as 'emergent' if vehicle response to or from the pickup location was coded as 4 (Emergency) *or* if priority at the scene of the pickup was coded as 3 (Serious) or 4 (Life Threat).

Interfacility transfers (IFTs) - were identified as any call, regardless of call type, where both pickup and destination locations were Hospitals, Health Centres, Integrated Care Facilities, Mental Health facilities, or Special Care (Nursing) Homes.

Saskatchewan Emergency Medical Services (EMS) Development Project

Attachment 1

Simulation Results - Select Response Time Measures as Additional Full-Time Ambulances are Added

No. of Core Coverage Areas	Foci of Full-Time Ambulance Coverage	Shared Service Area	Patient Flow Zone	All Emergency Calls: Avg. Response time (minutes)	Estimated Pct. Of Emergency Calls within: 8:59	25 min	30 min	45 min	Emergency Calls where pickup location is a major centre (St. Saskatoon, Regina, Prince Albert, Yorkton, Moose Jaw, Lloydminster, Battleford, Swift Current, Estevan, Weyburn): Avg. Response time (minutes)	Estimated Pct. Of Emergency Calls within: 8:59 (Note 1)	25 min	30 min	45 min	Emergency Calls where pickup location is other than a major centre: Avg. Response time (minutes)	Estimated Pct. Of Emergency Calls within: 8:59	25 min	30 min	45 min
1	Saskatoon	13	Saskatoon	119.64	23.26%	24.51%	24.91%	25.73%	93.23	39.28%	39.28%	39.28%	39.28%	157.97	0.00%	3.07%	4.05%	6.05%
2	Regina	6	Regina	64.54	41.05%	43.08%	43.58%	45.43%	32.62	69.33%	69.33%	69.33%	69.33%	110.88	0.00%	4.98%	6.19%	10.74%
3	Lloydminster	18	Northwest	59.67	41.76%	43.89%	44.46%	46.69%	30.59	70.53%	70.53%	70.53%	70.53%	101.87	0.00%	5.21%	6.63%	12.09%
4	Prince Albert	17	Prince Albert	50.89	47.37%	49.97%	51.00%	53.97%	22.72	80.00%	80.00%	80.00%	80.00%	91.79	0.00%	6.38%	8.89%	16.19%
5	North Battleford	15	North Battleford	47.81	49.79%	52.62%	53.82%	57.78%	19.40	84.09%	84.09%	84.09%	84.09%	89.03	0.00%	6.95%	9.89%	19.59%
6	Yorkton	8	Yorkton	40.42	51.96%	55.01%	57.01%	61.74%	15.37	87.75%	87.75%	87.75%	87.75%	76.78	0.00%	7.50%	12.39%	23.97%
7	Moose Jaw	6	Regina	36.47	55.87%	59.08%	61.11%	65.83%	11.74	94.15%	94.15%	94.15%	94.15%	72.35	0.29%	8.13%	13.16%	24.71%
8	Swift Current	4	Swift Current	32.91	57.30%	60.59%	62.71%	67.72%	9.33	96.57%	96.57%	96.57%	96.57%	67.15	0.29%	8.37%	13.35%	25.84%
9	Weyburn	3	Regina	30.24	58.40%	61.83%	63.95%	69.63%	6.98	98.31%	98.31%	98.31%	98.31%	64.00	0.48%	8.87%	14.09%	28.01%
10	Estevan	1	Estevan	29.35	59.48%	62.98%	65.26%	70.88%	6.11	100.00%	100.00%	100.00%	100.00%	63.08	0.67%	9.23%	14.84%	28.61%
11	Meadow Lake	20	Northwest	28.09	60.18%	64.00%	66.29%	72.14%	6.11	100.00%	100.00%	100.00%	100.00%	59.99	2.37%	11.75%	17.35%	31.70%
12	Nipawin	19	Saskatoon	26.16	60.89%	64.80%	67.19%	74.48%	6.11	100.00%	100.00%	100.00%	100.00%	55.27	4.12%	13.70%	19.56%	37.40%
13	Melfort	16	Saskatoon	25.21	61.73%	65.81%	69.23%	75.77%	6.11	100.00%	100.00%	100.00%	100.00%	52.93	6.18%	16.19%	24.57%	40.59%
14	Tisdale	16	Saskatoon	24.64	62.62%	66.76%	69.32%	75.86%	6.11	100.00%	100.00%	100.00%	100.00%	51.53	8.35%	18.52%	24.78%	40.82%
15	Humboldt	12	Saskatoon	23.78	63.17%	67.43%	70.23%	77.08%	6.11	100.00%	100.00%	100.00%	100.00%	49.41	9.70%	20.16%	27.03%	43.81%
16	Kindersley	9	Saskatoon	22.34	63.66%	67.95%	70.83%	78.30%	6.11	100.00%	100.00%	100.00%	100.00%	45.89	10.91%	21.43%	28.49%	46.79%
17	Melville	8	Yorkton	21.85	64.32%	68.66%	70.96%	78.97%	6.11	100.00%	100.00%	100.00%	100.00%	44.70	12.54%	23.17%	29.81%	48.44%
18	Wharewood	5	Regina	20.83	64.51%	69.12%	71.85%	80.88%	6.11	100.00%	100.00%	100.00%	100.00%	42.19	12.98%	24.29%	30.49%	53.12%
19	Estevan (NEW SITE)	10	Regina	19.84	64.55%	70.00%	72.66%	82.62%	6.11	100.00%	100.00%	100.00%	100.00%	39.77	13.10%	26.45%	32.98%	57.38%
20	Assiniboia	2	Regina	18.90	65.36%	70.86%	73.72%	84.04%	6.11	100.00%	100.00%	100.00%	100.00%	37.47	15.09%	28.55%	35.58%	60.87%
21	Fort Qu Appelle	6	Regina	18.34	65.76%	72.09%	75.54%	85.44%	6.11	100.00%	100.00%	100.00%	100.00%	36.10	16.05%	31.58%	40.04%	64.31%
22	Canora	11	Yorkton	17.80	66.17%	72.70%	76.71%	86.77%	6.11	100.00%	100.00%	100.00%	100.00%	34.76	17.06%	33.06%	42.89%	67.56%
23	Maple Creek	4	Swift Current	17.28	66.56%	73.23%	77.24%	87.34%	6.11	100.00%	100.00%	100.00%	100.00%	33.49	18.03%	34.37%	44.20%	68.97%
24	Shellbrook (NEW SITE)	17	Prince Albert	16.77	66.88%	74.02%	78.19%	88.34%	6.11	100.00%	100.00%	100.00%	100.00%	32.24	18.82%	36.32%	46.54%	71.42%
25	Rosetown	7	Saskatoon	16.28	67.18%	74.40%	78.67%	89.35%	6.11	100.00%	100.00%	100.00%	100.00%	31.05	19.55%	37.23%	47.70%	73.90%
26	Carlyle	1	Estevan	15.82	67.59%	75.07%	79.52%	90.45%	6.11	100.00%	100.00%	100.00%	100.00%	29.90	20.54%	38.88%	49.79%	76.58%
27	St Walburg	20	Northwest	15.40	67.80%	76.25%	80.70%	91.56%	6.11	100.00%	100.00%	100.00%	100.00%	28.89	21.06%	41.77%	52.69%	79.31%
28	Punnichy (NEW SITE)	10	Regina	15.00	67.92%	77.38%	81.89%	92.45%	6.11	100.00%	100.00%	100.00%	100.00%	27.90	21.35%	44.35%	55.61%	81.50%
29	Shaunavon	4	Swift Current	14.69	68.19%	77.68%	82.28%	92.96%	6.11	100.00%	100.00%	100.00%	100.00%	27.14	22.01%	45.29%	56.35%	82.75%
30	Spiritwood	17	Prince Albert	14.39	68.66%	78.24%	82.84%	93.62%	6.11	100.00%	100.00%	100.00%	100.00%	26.41	23.16%	46.65%	57.93%	84.35%
31	Kelvington	14	Saskatoon	14.11	69.13%	78.88%	83.65%	94.34%	6.11	100.00%	100.00%	100.00%	100.00%	25.71	24.33%	48.23%	59.91%	86.11%
32	Unity	15	North Battleford	13.85	69.36%	79.42%	84.19%	94.87%	6.11	100.00%	100.00%	100.00%	100.00%	25.08	24.89%	49.56%	61.24%	87.42%
33	Outlook	7	Saskatoon	13.61	69.70%	79.81%	84.58%	95.29%	6.11	100.00%	100.00%	100.00%	100.00%	24.49	25.71%	50.51%	62.19%	88.43%
34	Rosthern	13	Saskatoon	13.38	70.02%	80.35%	85.17%	95.51%	6.11	100.00%	100.00%	100.00%	100.00%	23.93	26.51%	51.84%	63.65%	88.99%
35	Indian Head	6	Regina	13.17	70.61%	81.13%	85.36%	95.78%	6.11	100.00%	100.00%	100.00%	100.00%	23.40	27.95%	53.73%	64.10%	89.67%
36	Warman	12	Saskatoon	12.98	70.85%	81.43%	85.71%	96.17%	6.11	100.00%	100.00%	100.00%	100.00%	22.95	28.55%	54.47%	64.96%	90.62%
37	Kamsack	11	Yorkton	12.80	71.45%	82.17%	86.07%	96.30%	6.11	100.00%	100.00%	100.00%	100.00%	22.51	30.02%	56.30%	65.84%	90.94%
38	Biggar	7	Saskatoon	12.63	71.89%	82.69%	86.61%	96.37%	6.11	100.00%	100.00%	100.00%	100.00%	22.08	31.08%	57.56%	67.18%	91.11%
39	Hudson Bay	14	Saskatoon	12.46	72.12%	82.92%	86.85%	96.64%	6.11	100.00%	100.00%	100.00%	100.00%	21.68	31.65%	58.13%	67.75%	91.75%
40	Moosomin	5	Regina	12.31	72.46%	83.37%	87.29%	96.76%	6.11	100.00%	100.00%	100.00%	100.00%	21.31	32.48%	59.22%	68.84%	92.05%
41	Kipling	5	Regina	12.17	72.81%	83.79%	87.71%	96.86%	6.11	100.00%	100.00%	100.00%	100.00%	20.96	33.35%	60.26%	69.88%	92.30%
42	Strasbourg	6	Regina	12.03	72.96%	84.13%	88.17%	97.08%	6.11	100.00%	100.00%	100.00%	100.00%	20.61	33.72%	61.08%	71.01%	92.84%
43	Grenfellburg	2	Regina	11.88	73.18%	84.50%	88.48%	97.20%	6.11	100.00%	100.00%	100.00%	100.00%	20.26	34.25%	62.01%	71.77%	93.14%
44	Lander	9	Saskatoon	11.74	73.38%	84.72%	88.72%	97.48%	6.11	100.00%	100.00%	100.00%	100.00%	19.91	34.73%	62.55%	72.34%	93.81%
45	Preeceville	11	Yorkton	11.61	73.74%	85.19%	89.14%	97.49%	6.11	100.00%	100.00%	100.00%	100.00%	19.58	35.63%	63.69%	73.37%	93.83%
46	Davidson	7	Saskatoon	11.47	73.91%	85.47%	89.44%	97.79%	6.11	100.00%	100.00%	100.00%	100.00%	19.25	36.03%	64.38%	74.12%	94.57%
47	Bengough	2	Regina	11.34	74.08%	85.68%	89.66%	98.14%	6.11	100.00%	100.00%	100.00%	100.00%	18.92	36.45%	64.90%	74.68%	95.44%
48	Blaine Lake	17	Prince Albert	11.20	74.31%	86.11%	90.06%	98.16%	6.11	100.00%	100.00%	100.00%	100.00%	18.59	37.03%	65.95%	75.62%	95.50%
49	Oxbow	1	Estevan	11.07	74.52%	86.47%	90.42%	98.32%	6.11	100.00%	100.00%	100.00%	100.00%	18.27	37.53%	66.82%	76.50%	95.88%
50	Central Butte	7	Saskatoon	10.95	74.62%	86.65%	90.66%	98.60%	6.11	100.00%	100.00%	100.00%	100.00%	17.97	37.78%	67.28%	77.11%	96.57%
51	Esterhazy	9	Saskatoon	10.83	74.94%	86.97%	90.98%	98.64%	6.11	100.00%	100.00%	100.00%	100.00%	17.66	38.55%	68.06%	77.88%	96.66%
52	Emerhazy	5	Regina	10.70	75.21%	87.32%	91.33%	98.77%	6.11	100.00%	100.00%	100.00%	100.00%	17.37	39.22%	68.91%	78.76%	96.99%
53	Ponteix	4	Swift Current	10.61	75.34%	87.53%	91.56%	98.97%	6.11	100.00%	100.00%	100.00%	100.00%	17.13	39.56%	69.43%	79.30%	97.48%
54	Fillmore	3	Regina	10.51	75.46%	87.74%	92.04%	98.97%	6.11	100.00%	100.00%	100.00%	100.00%	16.90	39.83%	69.94%	80.48%	97.48%
55	Watson	12	Saskatoon	10.42	75.64%	88.17%	92.29%	99.01%	6.11	100.00%	100.00%	100.00%	100.00%	16.67	40.29%	71.00%	81.11%	97.57%
56	Big River	17	Prince Albert	10.33	75.68%	88.36%	92.51%	99.20%	6.11	100.00%	100.00%	100.00%	100.00%	16.44	40.39%	71.47%	81.65%	98.04%
57	Leross (NEW SITE)	10	Regina	10.24	76.10%	88.59%	92.69%	99.20%	6.11	100.00%	100.00%	100.00%	100.00%	16.22	41.41%	72.03%	82.08%	98.04%
58	Loon Lake (NEW SITE)	20	Northwest	10.15	76.32%	88.85%	92.95%	99.29%	6.11	100.00%	100.00%	100.00%	100.00%	16.00	41.94%	72.67%	82.72%	98.25%
59	Kamsack	9	Saskatoon	10.06	76.53%	89.13%	93.26%	99.32%	6.11	100.00%	100.00%	100.00%	100.00%	15.79	42.46%	73.35%	83.47%	98.33%
60	Maidstone	18	Northwest	9.98	76.74%	89.37%	93.50%	99.35%	6.11	100.00%	100.00%	100.00%	100.00%	15.58	42.99%	73.95%	84.06%	98.41%
61	Cupar	6	Regina	9.90	76.96%	89.70%	93.70%	99.35%	6.11	100.00%	100.00%	100.00%	100.00%	15.39	43.51%	74.75%	84.56%	98.41%
62	Broadview (NEW SITE)	5	Regina	9.82	77.19%	90.00%	93.87%	99.35%	6.11	100.00%	100.00%	100.00%	100.00%	15.20	44.08%	75.49%	84.97%	98.41%
63	Carrot River	19	Saskatoon	9.74	77.27%	90.51%	94.29%	99.35%	6.11	100.00%	100.00%	100.00%	100.00%	15.01	44.27%	76.75%	86.01%	98.41%
64	Canwood (NEW SITE)	17	Prince Albert	9.67	77.29%	90.99%	94.29%	99.35%	6.11	100.00%	100.00%	100.00%	100.00%	14.84	44.32%	77.90%	86.01%	98.41%
65	Wakaw	13	Saskatoon	9.61	77.38%	91.28%	94.58%	99.36%	6.11	100.00%	100.00%	100.00%	100.00%	14.68	44.54%	78.62%	86.71%	98.41%
66	Porcupine Plain	14	Saskatoon	9.54	77.52%	91.47%	94.79%	99.36%	6.11	100.00%	100.00%	100.00%	100.00%	14.52	44.90%	79.10%	87.22%	98.44%
67	Cut Knife	15	North Battleford	9.48	77.73%	91.69%	95.03%	99.36%	6.11	100.00%	100.00%	100.00%	100.00%	14.36	45.40%	79.62%	87.83%	98.44%
68	Delmeny (NEW SITE)	13	Saskatoon	9.42	77.80%	91.76%	95.15%	99.36%	6.11	100.00%	100.00%	100.00%	100.00%	14.21	45.59%	79.79%	88.11%	98.44%
69	Kyle	7	Saskatoon	9.36	77.89%	91.87%	95.26%	99.51%	6.11	100.00%	100.00%	100.00%	100.00%	14.06	45.80%	80.07%	88.38%	98.80%
70	Wynyard	10	Regina	9.30	78.28%	91.93%	95.27%	99.51%	6.11	100.00%	100.00%	100.00%	100.00%	13.92	46.74%	80.21%	88.46%	98.80%
71	Milestone	6	Regina	9.24	78.35%	92.10%	95.52%	99.56%	6.11	100.00%	100.00%	100.00%	100.00%	13.78	46.91%	80.64%	89.01%	98.91%
72	Coronach	2	Regina	9.18	78.48%	92.23%	95.73%	99.56%	6.11	100.00%	100.00%	100.00%	100.00%	13.64	47.24%	80.93%	89.53%	98.91%
73	Macklin	15	North Battleford	9.13	78.61%	92.40%	95.92%	99.56%	6.11	100.00%	100.00%	100.00%	100.00%	13.50	47.56%	81.38%	90.00%	98.91%
74	Tunleford (NEW SITE)	20	Northwest	9.07	78.77%	92.49%	96.00%	99.56%	6.11	100.00%	100.00%	100.00%	100.00%	13.37	47.96%	81.58%	90.20%	98.93%
75	Pangman	2	Regina	9.02	78.91%	92.63%	96.15%	99.57%	6.11	100.00%	100.00%	100.00%	100.00%	13.24	48.30%	81.94%	90.56%	98.94%

Saskatchewan Emergency Medical Services (EMS) Development Project

Attachment I

Simulation Results - Select Response Time Measures as Additional Full-Time Ambulances are Added

No. of Core Coverage Areas	Foci of Full-Time Ambulance Coverage	Shared Service Area	Parent Flow Zone	All Emergency Calls: Avg. Response time (minutes)	Estimated Pct. Of Emergency Calls within: 8:59	25 min	30 min	45 min	Emergency Calls where pickup location is a major centre (St. Andrews, Regina, Prince Albert, Yorkton, Moose Jaw, Lloydminster, Battleford, Swift Current, Estevan, Weyburn): Avg. Response time (minutes)	Estimated Pct. Of Emergency Calls within: 8:59 (Note 1)	25 min	30 min	45 min	Emergency Calls where pickup location is other than a major centre: Avg. Response time (minutes)	Estimated Pct. Of Emergency Calls within: 8:59	25 min	30 min	45 min
76	Gull Lake	4	Swift Current	8.97	79.01%	92.81%	96.32%	99.62%	6.11	100.00%	100.00%	100.00%	100.00%	13.12	48.53%	82.36%	90.98%	99.06%
77	Stoughton	3	Regina	8.92	79.17%	92.97%	96.32%	99.62%	6.11	100.00%	100.00%	100.00%	100.00%	13.00	48.96%	82.77%	90.99%	99.06%
78	Lumsden (NEW SITE)	6	Regina	8.87	79.31%	93.13%	96.47%	99.63%	6.11	100.00%	100.00%	100.00%	100.00%	12.88	49.27%	83.16%	91.35%	99.10%
79	Langan	12	Saskatoon	8.83	79.43%	93.30%	96.73%	99.63%	6.11	100.00%	100.00%	100.00%	100.00%	12.77	49.57%	83.58%	91.99%	99.10%
80	Wilkie	15	North Battleford	8.78	79.70%	93.30%	96.73%	99.63%	6.11	100.00%	100.00%	100.00%	100.00%	12.65	50.23%	83.58%	91.99%	99.10%
81	Watrous	10	Regina	8.74	79.95%	93.35%	96.73%	99.63%	6.11	100.00%	100.00%	100.00%	100.00%	12.54	50.84%	83.69%	92.00%	99.10%
82	Dalsele	13	Saskatoon	8.69	80.10%	93.58%	96.75%	99.63%	6.11	100.00%	100.00%	100.00%	100.00%	12.43	51.21%	84.27%	92.02%	99.10%
83	Radvers	1	Estevan	8.65	80.27%	93.77%	96.77%	99.63%	6.11	100.00%	100.00%	100.00%	100.00%	12.32	51.62%	84.73%	92.07%	99.10%
84	Balcarres	6	Regina	8.60	80.50%	93.77%	96.79%	99.63%	6.11	100.00%	100.00%	100.00%	100.00%	12.21	52.20%	84.73%	92.13%	99.10%
85	Cabri	4	Swift Current	8.56	80.59%	93.91%	96.90%	99.65%	6.11	100.00%	100.00%	100.00%	100.00%	12.11	52.41%	85.07%	92.40%	99.13%
86	Langenburg	5	Regina	8.52	80.68%	94.09%	97.03%	99.65%	6.11	100.00%	100.00%	100.00%	100.00%	12.01	52.63%	85.51%	92.71%	99.14%
87	Moosmanie (NEW SITE)	3	Regina	8.48	80.83%	94.29%	97.12%	99.65%	6.11	100.00%	100.00%	100.00%	100.00%	11.91	53.00%	86.01%	92.93%	99.14%
88	Foam Lake	10	Regina	8.44	81.02%	94.36%	97.16%	99.65%	6.11	100.00%	100.00%	100.00%	100.00%	11.81	53.47%	86.17%	93.04%	99.14%
89	Climax (NEW SITE)	4	Swift Current	8.40	81.10%	94.46%	97.28%	99.68%	6.11	100.00%	100.00%	100.00%	100.00%	11.71	53.66%	86.43%	93.34%	99.22%
90	Hafford (NEW SITE)	17	Prince Albert	8.36	81.25%	94.55%	97.32%	99.68%	6.11	100.00%	100.00%	100.00%	100.00%	11.62	54.03%	86.63%	93.41%	99.22%
91	Grenfell	5	Regina	8.32	81.42%	94.58%	97.32%	99.68%	6.11	100.00%	100.00%	100.00%	100.00%	11.53	54.44%	86.71%	93.43%	99.22%
92	Wawota	1	Estevan	8.29	81.52%	94.69%	97.44%	99.68%	6.11	100.00%	100.00%	100.00%	100.00%	11.44	54.70%	86.99%	93.73%	99.22%
93	Rose Valley	14	Saskatoon	8.25	81.61%	94.86%	97.46%	99.68%	6.11	100.00%	100.00%	100.00%	100.00%	11.35	54.92%	87.40%	93.76%	99.22%
94	Leask (NEW SITE)	17	Prince Albert	8.21	81.89%	94.86%	97.46%	99.68%	6.11	100.00%	100.00%	100.00%	100.00%	11.26	55.60%	87.40%	93.76%	99.22%
95	Nipawin	12	Saskatoon	8.18	82.00%	94.92%	97.52%	99.68%	6.11	100.00%	100.00%	100.00%	100.00%	11.19	55.88%	87.56%	93.91%	99.22%
96	Inuvale	10	Regina	8.15	82.16%	94.94%	97.53%	99.68%	6.11	100.00%	100.00%	100.00%	100.00%	11.11	56.25%	87.60%	93.96%	99.22%
97	Radville (NEW SITE)	3	Regina	8.12	82.24%	95.04%	97.63%	99.69%	6.11	100.00%	100.00%	100.00%	100.00%	11.04	56.45%	87.83%	94.18%	99.25%
98	Herbert (NEW SITE)	4	Swift Current	8.10	82.29%	95.15%	97.72%	99.72%	6.11	100.00%	100.00%	100.00%	100.00%	10.97	56.59%	88.11%	94.41%	99.31%
99	Beechy	7	Saskatoon	8.07	82.35%	95.22%	97.83%	99.72%	6.11	100.00%	100.00%	100.00%	100.00%	10.91	56.72%	88.28%	94.69%	99.33%
100	Theodore (NEW SITE)	8	Yorkton	8.04	82.41%	95.32%	97.90%	99.72%	6.11	100.00%	100.00%	100.00%	100.00%	10.84	56.88%	88.53%	94.85%	99.33%
101	Maryfield	5	Regina	8.02	82.51%	95.42%	97.99%	99.72%	6.11	100.00%	100.00%	100.00%	100.00%	10.78	57.12%	88.77%	95.07%	99.33%
102	Rocklgien (NEW SITE)	2	Regina	7.99	82.58%	95.52%	98.01%	99.75%	6.11	100.00%	100.00%	100.00%	100.00%	10.71	57.30%	89.02%	95.12%	99.38%
103	Midale (NEW SITE)	1	Estevan	7.96	82.68%	95.62%	98.01%	99.75%	6.11	100.00%	100.00%	100.00%	100.00%	10.65	57.54%	89.26%	95.12%	99.38%
104	Carnduff	1	Estevan	7.94	82.79%	95.67%	98.05%	99.75%	6.11	100.00%	100.00%	100.00%	100.00%	10.58	57.81%	89.39%	95.21%	99.38%
105	Norquay	11	Yorkton	7.91	82.86%	95.75%	98.08%	99.75%	6.11	100.00%	100.00%	100.00%	100.00%	10.52	57.99%	89.57%	95.28%	99.38%
106	Esterod	4	Swift Current	7.89	82.95%	95.84%	98.09%	99.75%	6.11	100.00%	100.00%	100.00%	100.00%	10.46	58.19%	89.80%	95.31%	99.40%
107	Birch Hills (NEW SITE)	17	Prince Albert	7.86	83.05%	95.96%	98.10%	99.75%	6.11	100.00%	100.00%	100.00%	100.00%	10.40	58.46%	90.10%	95.33%	99.40%
108	Duck Lake (NEW SITE)	13	Saskatoon	7.84	83.14%	96.09%	98.22%	99.75%	6.11	100.00%	100.00%	100.00%	100.00%	10.34	58.68%	90.41%	95.64%	99.40%
109	Dunmore	7	Saskatoon	7.81	83.21%	96.17%	98.29%	99.75%	6.11	100.00%	100.00%	100.00%	100.00%	10.29	58.85%	90.62%	95.81%	99.40%
110	Neilburg	15	North Battleford	7.79	83.29%	96.25%	98.33%	99.75%	6.11	100.00%	100.00%	100.00%	100.00%	10.23	59.04%	90.81%	95.92%	99.40%
111	Radisson (NEW SITE)	13	Saskatoon	7.77	83.36%	96.28%	98.33%	99.75%	6.11	100.00%	100.00%	100.00%	100.00%	10.17	59.21%	90.88%	95.92%	99.40%
112	Kinistino (NEW SITE)	19	Saskatoon	7.75	83.37%	96.38%	98.43%	99.75%	6.11	100.00%	100.00%	100.00%	100.00%	10.12	59.24%	91.13%	96.15%	99.40%
113	Maniwaki (NEW SITE)	4	Swift Current	7.73	83.41%	96.43%	98.48%	99.76%	6.11	100.00%	100.00%	100.00%	100.00%	10.07	59.33%	91.26%	96.27%	99.41%
114	Nokomis (NEW SITE)	6	Regina	7.71	83.48%	96.53%	98.48%	99.76%	6.11	100.00%	100.00%	100.00%	100.00%	10.02	59.51%	91.49%	96.27%	99.41%
115	Wolseley (NEW SITE)	6	Regina	7.69	83.63%	96.53%	98.48%	99.76%	6.11	100.00%	100.00%	100.00%	100.00%	9.97	59.88%	91.49%	96.27%	99.41%
116	Elrose	7	Saskatoon	7.67	83.72%	96.61%	98.50%	99.76%	6.11	100.00%	100.00%	100.00%	100.00%	9.92	60.08%	91.69%	96.32%	99.41%
117	Eatonia	9	Saskatoon	7.65	83.78%	96.70%	98.52%	99.76%	6.11	100.00%	100.00%	100.00%	100.00%	9.87	60.23%	91.90%	96.36%	99.41%
118	Cmik (NEW SITE)	7	Saskatoon	7.63	83.86%	96.71%	98.56%	99.76%	6.11	100.00%	100.00%	100.00%	100.00%	9.83	60.42%	91.95%	96.46%	99.41%
119	Inverway (NEW SITE)	11	Yorkton	7.61	83.91%	96.82%	98.61%	99.76%	6.11	100.00%	100.00%	100.00%	100.00%	9.78	60.54%	92.19%	96.60%	99.41%
120	Lampman	1	Estevan	7.59	83.97%	96.88%	98.63%	99.76%	6.11	100.00%	100.00%	100.00%	100.00%	9.74	60.71%	92.36%	96.64%	99.41%
121	Cudworth	13	Saskatoon	7.58	84.07%	96.90%	98.67%	99.76%	6.11	100.00%	100.00%	100.00%	100.00%	9.70	60.94%	92.41%	96.73%	99.41%
122	Consul	4	Swift Current	7.56	84.07%	96.94%	98.70%	99.79%	6.11	100.00%	100.00%	100.00%	100.00%	9.66	60.96%	92.51%	96.82%	99.49%
123	Leoville (NEW SITE)	17	Prince Albert	7.54	84.13%	96.97%	98.73%	99.79%	6.11	100.00%	100.00%	100.00%	100.00%	9.62	61.09%	92.58%	96.89%	99.49%
124	Lafleche (NEW SITE)	2	Regina	7.53	84.24%	96.97%	98.74%	99.79%	6.11	100.00%	100.00%	100.00%	100.00%	9.58	61.37%	92.58%	96.91%	99.49%
125	Kinistino (NEW SITE)	16	Saskatoon	7.51	84.30%	97.06%	98.74%	99.79%	6.11	100.00%	100.00%	100.00%	100.00%	9.54	61.50%	92.90%	96.91%	99.49%
126	Lemock	10	Regina	7.50	84.30%	97.06%	98.74%	99.79%	6.11	100.00%	100.00%	100.00%	100.00%	9.51	61.50%	92.80%	96.91%	99.49%
127	Roosevelle (NEW SITE)	5	Regina	7.49	84.36%	97.09%	98.74%	99.79%	6.11	100.00%	100.00%	100.00%	100.00%	9.48	61.63%	92.87%	96.91%	99.49%
128	Edam (NEW SITE)	15	North Battleford	7.47	84.39%	97.09%	98.74%	99.79%	6.11	100.00%	100.00%	100.00%	100.00%	9.44	61.74%	92.88%	96.91%	99.49%
129	Raymore (NEW SITE)	10	Regina	7.46	84.48%	97.09%	98.74%	99.79%	6.11	100.00%	100.00%	100.00%	100.00%	9.41	61.86%	92.88%	96.91%	99.49%
130	Imperial	12	Saskatoon	7.45	84.53%	97.15%	98.74%	99.79%	6.11	100.00%	100.00%	100.00%	100.00%	9.38	62.07%	93.01%	96.92%	99.49%
131	Lucky Lake	7	Saskatoon	7.43	84.57%	97.20%	98.75%	99.79%	6.11	100.00%	100.00%	100.00%	100.00%	9.35	62.18%	93.14%	96.94%	99.49%
132	Grandeol (NEW SITE)	20	Northwest	7.42	84.60%	97.25%	98.80%	99.79%	6.11	100.00%	100.00%	100.00%	100.00%	9.32	62.25%	93.25%	97.05%	99.49%
133	Richmound	4	Swift Current	7.41	84.61%	97.28%	98.84%	99.81%	6.11	100.00%	100.00%	100.00%	100.00%	9.29	62.27%	93.33%	97.15%	99.53%
134	Quill Lake (NEW SITE)	12	Saskatoon	7.40	84.67%	97.28%	98.84%	99.81%	6.11	100.00%	100.00%	100.00%	100.00%	9.27	62.43%	93.33%	97.15%	99.53%
135	Dodsland	9	Saskatoon	7.39	84.70%	97.32%	98.87%	99.81%	6.11	100.00%	100.00%	100.00%	100.00%	9.24	62.49%	93.43%	97.22%	99.53%
136	Hague (NEW SITE)	13	Saskatoon	7.38	84.81%	97.32%	98.87%	99.81%	6.11	100.00%	100.00%	100.00%	100.00%	9.22	62.75%	93.43%	97.22%	99.53%
137	Lashburn (NEW SITE)	18	Northwest	7.37	84.84%	97.32%	98.87%	99.81%	6.11	100.00%	100.00%	100.00%	100.00%	9.20	62.84%	93.43%	97.22%	99.53%
138	Bruno (NEW SITE)	12	Saskatoon	7.36	84.88%	97.36%	98.87%	99.81%	6.11	100.00%	100.00%	100.00%	100.00%	9.18	62.92%	93.53%	97.22%	99.53%
139	Hawarden (NEW SITE)	7	Saskatoon	7.35	84.88%	97.40%	98.94%	99.81%	6.11	100.00%	100.00%	100.00%	100.00%	9.16	62.93%	93.62%	97.41%	99.53%
140	Churchbridge	5	Regina	7.35	84.93%	97.45%	98.94%	99.81%	6.11	100.00%	100.00%	100.00%	100.00%	9.14	63.06%	93.76%	97.41%	99.53%
141	Langham (NEW SITE)	13	Saskatoon	7.34	85.05%	97.45%	98.94%	99.81%	6.11	100.00%	100.00%	100.00%	100.00%	9.12	63.36%	93.76%	97.41%	99.53%
142	Colonsay (NEW SITE)	9	Saskatoon	7.33	85.07%	97.47%	98.96%	99.81%	6.11	100.00%	100.00%	100.00%	100.00%	9.10	63.41%	93.79%	97.45%	99.53%
143	Limerick (NEW SITE)	2	Regina	7.32	85.12%	97.47%	98.96%	99.81%	6.11	100.00%	100.00%	100.00%	100.00%	9.08	63.52%	93.79%	97.45%	99.53%
144	Luseland	9	Saskatoon	7.32	85.17%	97.47%	98.96%	99.81%	6.11	100.00%	100.00%	100.00%	100.00%	9.07	63.64%	93.79%	97.45%	99.53%
145	Arborfield (NEW SITE)	19	Saskatoon	7.31	85.20%	97.47%	98.96%	99.81%	6.11	100.00%	100.00%	100.00%	100.00%	9.05	63.73%	93.79%	97.45%	99.53%
146	Lanty	12	Saskatoon	7.31	85.24%	97.47%	98.96%	99.81%	6.11	100.00%	100.00%	100.00%	100.00%	9.03	63.81%	93.79%	97.45%	99.53%
147	Pelly (NEW SITE)	11	Yorkton	7.30	85.26%	97.48%	98.96%	99.81%	6.11	100.00%	100.00%	100.00%	100.00%	9.02	63.87%	93.81%	97.45%	99.53%
148	Kincaid (NEW SITE)	4	Swift Current	7.29	85.29%	97.49%	98.96%	99.81%	6.11	100.00%	100.00%	100.00%	100.00%	9.01	63.94%	93.84%	97.45%	99.53%
149	Gronsborough (NEW SITE	1	Estevan	7.29	85.32%	97.49%	98.96%	99.81%	6.11	100.00%	100.00%	100.00%	100.00%	8.99	64.02%	93.84%	97.45%	99.53%
150	Quinton (NEW SITE)	10	Regina	7.28	85.32%	97.49%	98.96%	99.81%	6.11	100.00%	100.00%	100.00%	100.00%	8.98	64.02%	93.84%	97.45%	99.53%

Saskatchewan Emergency Medical Services (EMS) Development Project

Attachment I

Simulation Results - Select Response Time Measures as Additional Full-Time Ambulances are Added

No. of Core Coverage Areas	Foci of Full-Time Ambulance Coverage	Shared Service Area	Parent Flow Zone	All Emergency Calls: Avg. Response time (minutes)	All Emergency Calls: Estimated Pct. Of Emergency Calls within 8:59	25 min	30 min	45 min	Emergency Calls where pickup location is a major centre (ie. Saskatoon, Regina, Prince Albert, Yorkton, Moose Jaw, Lloydminster, Battleford, Swift Current, Estevan, Weyburn): Avg. Response time (minutes)	Estimated Pct. Of Emergency Calls within 8:59 (Note 1)	25 min	30 min	45 min	Emergency Calls where pickup location is other than a major centre: Avg. Response time (minutes)	Estimated Pct. Of Emergency Calls within 8:59	25 min	30 min	45 min
151	Val Marie	4	Swift Current	7.28	85.33%	97.50%	98.97%	99.81%	6.11	100.00%	100.00%	100.00%	100.00%	8.97	64.05%	93.88%	97.48%	99.53%
152	Hodgeville (NEW SITE)	2	Regina	7.27	85.35%	97.53%	98.98%	99.81%	6.11	100.00%	100.00%	100.00%	100.00%	8.96	64.08%	93.95%	97.50%	99.53%
153	Govan (NEW SITE)	6	Regina	7.27	85.37%	97.53%	98.98%	99.81%	6.11	100.00%	100.00%	100.00%	100.00%	8.95	64.13%	93.95%	97.50%	99.53%
154	Waldheim (NEW SITE)	17	Prince Albert	7.27	85.39%	97.53%	98.98%	99.81%	6.11	100.00%	100.00%	100.00%	100.00%	8.94	64.18%	93.95%	97.50%	99.53%
155	Rabbit Lake (NEW SITE)	15	North Battleford	7.26	85.40%	97.54%	98.99%	99.81%	6.11	100.00%	100.00%	100.00%	100.00%	8.93	64.20%	93.98%	97.53%	99.53%
156	Liberty (NEW SITE)	12	Saskatoon	7.26	85.41%	97.57%	98.99%	99.81%	6.11	100.00%	100.00%	100.00%	100.00%	8.92	64.23%	94.04%	97.53%	99.53%
157	Primate (NEW SITE)	15	North Battleford	7.25	85.43%	97.58%	98.99%	99.81%	6.11	100.00%	100.00%	100.00%	100.00%	8.91	64.27%	94.08%	97.53%	99.53%
158	Lorsburn (NEW SITE)	7	Saskatoon	7.25	85.43%	97.58%	98.99%	99.81%	6.11	100.00%	100.00%	100.00%	100.00%	8.90	64.28%	94.08%	97.53%	99.53%
159	Semans (NEW SITE)	10	Regina	7.25	85.47%	97.58%	98.99%	99.81%	6.11	100.00%	100.00%	100.00%	100.00%	8.89	64.38%	94.08%	97.53%	99.53%
160	Glenavon (NEW SITE)	5	Regina	7.24	85.50%	97.58%	98.99%	99.81%	6.11	100.00%	100.00%	100.00%	100.00%	8.88	64.44%	94.08%	97.53%	99.53%
161	Malden (NEW SITE)	7	Saskatoon	7.24	85.52%	97.58%	98.99%	99.81%	6.11	100.00%	100.00%	100.00%	100.00%	8.87	64.50%	94.08%	97.53%	99.53%
162	Frontier	4	Swift Current	7.24	85.54%	97.60%	98.99%	99.81%	6.11	100.00%	100.00%	100.00%	100.00%	8.87	64.55%	94.11%	97.53%	99.53%
163	Wapella (NEW SITE)	5	Regina	7.23	85.57%	97.60%	98.99%	99.81%	6.11	100.00%	100.00%	100.00%	100.00%	8.86	64.63%	94.11%	97.53%	99.53%
164	Borden (NEW SITE)	13	Saskatoon	7.23	85.62%	97.60%	98.99%	99.81%	6.11	100.00%	100.00%	100.00%	100.00%	8.85	64.74%	94.11%	97.53%	99.53%
165	Kenosee Lake (NEW SITE)	1	Estevan	7.23	85.65%	97.60%	98.99%	99.81%	6.11	100.00%	100.00%	100.00%	100.00%	8.84	64.82%	94.11%	97.53%	99.53%
166	Lancer (NEW SITE)	9	Saskatoon	7.22	85.65%	97.61%	98.99%	99.81%	6.11	100.00%	100.00%	100.00%	100.00%	8.83	64.83%	94.15%	97.53%	99.53%
167	Alida (NEW SITE)	1	Estevan	7.22	85.67%	97.61%	98.99%	99.81%	6.11	100.00%	100.00%	100.00%	100.00%	8.83	64.86%	94.15%	97.53%	99.53%
168	Spalding (NEW SITE)	12	Saskatoon	7.22	85.67%	97.61%	98.99%	99.81%	6.11	100.00%	100.00%	100.00%	100.00%	8.82	64.86%	94.15%	97.53%	99.53%
169	Senlac (NEW SITE)	15	North Battleford	7.21	85.68%	97.62%	98.99%	99.81%	6.11	100.00%	100.00%	100.00%	100.00%	8.81	64.90%	94.16%	97.53%	99.53%
170	Wishart (NEW SITE)	10	Regina	7.21	85.70%	97.62%	98.99%	99.81%	6.11	100.00%	100.00%	100.00%	100.00%	8.81	64.95%	94.16%	97.53%	99.53%
171	Kennedy (NEW SITE)	1	Estevan	7.21	85.72%	97.62%	98.99%	99.81%	6.11	100.00%	100.00%	100.00%	100.00%	8.80	64.99%	94.16%	97.53%	99.53%
172	Fox Valley (NEW SITE)	9	Saskatoon	7.21	85.74%	97.62%	98.99%	99.81%	6.11	100.00%	100.00%	100.00%	100.00%	8.79	65.03%	94.16%	97.53%	99.53%
173	Burstall (NEW SITE)	9	Saskatoon	7.20	85.75%	97.63%	99.00%	99.81%	6.11	100.00%	100.00%	100.00%	100.00%	8.79	65.05%	94.19%	97.55%	99.53%
174	Alameda (NEW SITE)	1	Estevan	7.20	85.77%	97.63%	99.00%	99.81%	6.11	100.00%	100.00%	100.00%	100.00%	8.78	65.11%	94.19%	97.55%	99.53%
175	Glenworth (NEW SITE)	2	Regina	7.20	85.77%	97.64%	99.00%	99.81%	6.11	100.00%	100.00%	100.00%	100.00%	8.78	65.12%	94.21%	97.55%	99.53%
176	Weekes (NEW SITE)	14	Saskatoon	7.20	85.77%	97.64%	99.00%	99.81%	6.11	100.00%	100.00%	100.00%	100.00%	8.78	65.12%	94.21%	97.55%	99.53%
177	Manor (NEW SITE)	1	Estevan	7.20	85.79%	97.64%	99.00%	99.81%	6.11	100.00%	100.00%	100.00%	100.00%	8.77	65.18%	94.21%	97.55%	99.53%
178	Margo (NEW SITE)	14	Saskatoon	7.20	85.79%	97.64%	99.00%	99.81%	6.11	100.00%	100.00%	100.00%	100.00%	8.77	65.18%	94.21%	97.55%	99.53%
179	Elbow (NEW SITE)	7	Saskatoon	7.20	85.80%	97.64%	99.00%	99.81%	6.11	100.00%	100.00%	100.00%	100.00%	8.77	65.19%	94.21%	97.55%	99.53%
180	Windthorst (NEW SITE)	5	Regina	7.20	85.81%	97.64%	99.00%	99.81%	6.11	100.00%	100.00%	100.00%	100.00%	8.77	65.22%	94.21%	97.55%	99.53%
181	Denzil (NEW SITE)	15	North Battleford	7.20	85.82%	97.64%	99.00%	99.81%	6.11	100.00%	100.00%	100.00%	100.00%	8.77	65.25%	94.21%	97.55%	99.53%
182	Scepter (NEW SITE)	9	Saskatoon	7.19	85.83%	97.64%	99.00%	99.81%	6.11	100.00%	100.00%	100.00%	100.00%	8.76	65.26%	94.21%	97.55%	99.53%
183	Simpson (NEW SITE)	12	Saskatoon	7.19	85.84%	97.64%	99.00%	99.81%	6.11	100.00%	100.00%	100.00%	100.00%	8.76	65.28%	94.21%	97.55%	99.53%
184	Fleming (NEW SITE)	5	Regina	7.19	85.84%	97.64%	99.00%	99.81%	6.11	100.00%	100.00%	100.00%	100.00%	8.76	65.29%	94.21%	97.55%	99.53%
185	Carnevale (NEW SITE)	1	Estevan	7.19	85.84%	97.64%	99.00%	99.81%	6.11	100.00%	100.00%	100.00%	100.00%	8.76	65.29%	94.21%	97.55%	99.53%
186	Golden Prairie (NEW SITE)	4	Swift Current	7.19	85.84%	97.64%	99.00%	99.81%	6.11	100.00%	100.00%	100.00%	100.00%	8.76	65.29%	94.21%	97.55%	99.53%
187	Welwyn (NEW SITE)	5	Regina	7.19	85.85%	97.64%	99.00%	99.81%	6.11	100.00%	100.00%	100.00%	100.00%	8.76	65.30%	94.21%	97.55%	99.53%
188	Macrorie (NEW SITE)	7	Saskatoon	7.19	85.85%	97.64%	99.00%	99.81%	6.11	100.00%	100.00%	100.00%	100.00%	8.76	65.31%	94.21%	97.55%	99.53%
189	Prelate (NEW SITE)	9	Saskatoon	7.19	85.85%	97.64%	99.00%	99.81%	6.11	100.00%	100.00%	100.00%	100.00%	8.76	65.31%	94.21%	97.55%	99.53%
190	Watson (NEW SITE)	7	Saskatoon	7.19	85.85%	97.64%	99.00%	99.81%	6.11	100.00%	100.00%	100.00%	100.00%	8.76	65.31%	94.21%	97.55%	99.53%
191	Mervonne (NEW SITE)	4	Swift Current	7.19	85.85%	97.64%	99.00%	99.81%	6.11	100.00%	100.00%	100.00%	100.00%	8.76	65.31%	94.21%	97.55%	99.53%
192	Lestor (NEW SITE)	10	Regina	7.19	85.85%	97.64%	99.00%	99.81%	6.11	100.00%	100.00%	100.00%	100.00%	8.76	65.32%	94.21%	97.55%	99.53%
193	Strongfield (NEW SITE)	7	Saskatoon	7.19	85.85%	97.64%	99.00%	99.81%	6.11	100.00%	100.00%	100.00%	100.00%	8.76	65.32%	94.21%	97.55%	99.53%

- denotes 'point of diminishing return' (67 core coverage areas)

Note 1: The intra-city expected response times used in this project were estimated average travel times - i.e. they were not neighborhood-specific. Because an average expected response time was used in the analysis, a portion of emergency calls will be responded to beyond the 8:59 timeframe. It is estimated that 90% of emergency calls within the cities will be responded to within 8 minutes and 59 seconds.

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Attachment J: Summary of 3-Year Prospective Simulation (Emergent and Non-Emergent Calls)

	Oxbow	Estevan	Bengough	Carlyle	Weyburn	Assiniboia	Ponteix	Shaunavon	Fillmore	Gravelbourg	Maple Creek
	003 30	005 28	040 30	063 30	067 26	072 30	076 30	078 30	096 55	104 30	111 30
Annual Calls											
Sundays	34.00	88.67	32.33	104.33	123.67	93.00	16.33	33.33	42.67	26.00	50.00
Mondays	30.33	99.67	34.33	99.67	122.00	77.67	19.33	45.67	35.33	18.67	47.00
Tuesdays	40.00	94.00	29.67	110.67	143.67	80.33	17.67	30.67	41.67	29.00	45.67
Wednesdays	28.33	101.00	37.00	85.00	118.67	74.00	15.00	29.33	31.67	38.00	54.00
Thursdays	32.67	106.00	38.33	95.67	156.00	84.00	19.00	31.00	43.67	28.33	49.00
Fridays	34.67	105.33	41.00	101.00	141.67	78.00	27.33	34.00	37.33	33.33	60.00
Saturdays	30.33	108.33	41.67	104.00	126.00	92.00	26.33	35.33	39.00	31.67	49.00
Overall	230.33	703.00	254.33	700.33	931.67	579.00	141.00	239.33	271.33	205.00	354.67
Unit-hrs used											
Each Sunday	2.12	4.03	2.65	6.48	3.14	3.77	1.18	2.51	2.60	1.34	2.91
Each Monday	2.09	3.99	2.42	5.92	3.49	3.10	1.46	3.46	2.05	1.10	2.59
Each Tuesday	2.44	4.02	2.05	6.41	3.42	3.18	1.28	2.40	2.54	1.77	3.09
Each Wednesday	1.57	4.12	2.53	5.37	3.30	2.95	0.98	2.21	1.81	1.97	3.38
Each Thursday	1.94	4.32	2.71	5.85	3.72	3.28	1.10	2.07	2.49	1.41	3.44
Each Friday	2.31	4.62	2.83	5.99	3.39	3.04	2.06	2.57	1.98	1.83	3.52
Each Saturday	2.26	5.16	2.78	6.46	3.23	3.70	1.87	2.57	2.21	1.89	3.28
Each Week	14.74	30.25	17.97	42.49	23.69	23.02	9.93	17.80	15.68	11.31	22.21
Each Year	766.36	1,572.90	934.28	2,209.27	1,232.12	1,197.03	516.13	925.37	815.56	588.03	1,154.93
Unit-hrs required **(without consideration of minimum number of units at each site)**											
Each Sunday	17	24	22	30	23	21	9	24	23	9	24
Each Monday	17	23	21	27	22	21	12	24	18	12	24
Each Tuesday	19	24	18	26	24	20	10	24	21	15	24
Each Wednesday	15	22	22	24	24	18	6	21	17	16	23
Each Thursday	21	23	20	26	21	20	11	16	21	16	24
Each Friday	24	24	23	26	21	20	17	23	16	14	24
Each Saturday	17	24	18	29	24	24	18	23	23	17	24
Each Week	130	164	144	188	159	144	83	155	139	99	167
Each Year	6,760	8,528	7,488	9,776	8,268	7,488	4,316	8,060	7,228	5,148	8,684

Saskatchewan Emergency Medical Services (EMS) Development Project

Attachment J: Summary of 3-Year Prospective Simulation (Emergent and Non-Emergent Calls)

	Oxbow	Estevan	Bengough	Carlyle	Weyburn	Assiniboia	Ponteix	Shaunavon	Fillmore	Gravelbourg	Maple Creek
	003 30	005 28	040 30	063 30	067 26	072 30	076 30	078 30	096 55	104 30	111 30
Unit-hrs required (with consideration of minimum number of units at each site)											
Each Sunday	24	24	24	30	24	24	24	24	24	24	24
Each Monday	24	24	24	27	24	24	24	24	24	24	24
Each Tuesday	24	24	24	26	24	24	24	24	24	24	24
Each Wednesday	24	24	24	24	24	24	24	24	24	24	24
Each Thursday	24	24	24	26	26	24	24	24	24	24	24
Each Friday	24	24	24	26	24	24	24	24	24	24	24
Each Saturday	24	24	24	29	24	24	24	24	24	24	24
Each Week	168	168	168	188	170	168	168	168	168	168	168
Each Year	8,736	8,736	8,736	9,776	8,840	8,736	8,736	8,736	8,736	8,736	8,736
Units required (without consideration of minimum number of units at each site)											
0	22.62%	2.38%	14.29%	-	6.55%	14.29%	50.60%	7.74%	17.26%	41.07%	0.60%
1	77.38%	97.62%	85.71%	88.10%	92.26%	85.71%	49.40%	92.26%	82.74%	58.93%	99.40%
2	-	-	-	11.90%	1.19%	-	-	-	-	-	-
3	-	-	-	-	-	-	-	-	-	-	-
4	-	-	-	-	-	-	-	-	-	-	-
5	-	-	-	-	-	-	-	-	-	-	-
6	-	-	-	-	-	-	-	-	-	-	-
7	-	-	-	-	-	-	-	-	-	-	-
8	-	-	-	-	-	-	-	-	-	-	-
9	-	-	-	-	-	-	-	-	-	-	-
10	-	-	-	-	-	-	-	-	-	-	-
11	-	-	-	-	-	-	-	-	-	-	-
12	-	-	-	-	-	-	-	-	-	-	-
13	-	-	-	-	-	-	-	-	-	-	-
14	-	-	-	-	-	-	-	-	-	-	-
15	-	-	-	-	-	-	-	-	-	-	-
16	-	-	-	-	-	-	-	-	-	-	-
17	-	-	-	-	-	-	-	-	-	-	-
18	-	-	-	-	-	-	-	-	-	-	-
19	-	-	-	-	-	-	-	-	-	-	-
20	-	-	-	-	-	-	-	-	-	-	-
	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Saskatchewan Emergency Medical Services (EMS) Development Project

Attachment J: Summary of 3-Year Prospective Simulation (Emergent and Non-Emergent Calls)

	Oxbow 003 30	Estevan 005 28	Bengough 040 30	Carlyle 063 30	Weyburn 067 26	Assiniboia 072 30	Ponteix 076 30	Shaunavon 078 30	Fillmore 096 55	Gravelbourg 104 30	Maple Creek 111 30
Pct. Of Minutes with some units in process											
Sundays	8.50%	15.55%	10.54%	22.95%	12.01%	14.54%	4.91%	9.62%	10.32%	5.36%	11.40%
Mondays	8.20%	15.26%	9.80%	21.35%	13.16%	11.91%	6.00%	12.74%	8.09%	4.53%	10.23%
Tuesdays	9.58%	15.28%	8.26%	23.72%	13.02%	12.34%	5.32%	9.34%	10.28%	7.15%	12.36%
Wednesdays	6.42%	15.74%	9.74%	19.92%	12.71%	11.63%	3.95%	8.56%	7.30%	7.96%	13.17%
Thursdays	7.82%	16.00%	10.93%	21.72%	13.77%	12.96%	4.51%	8.00%	9.74%	5.82%	13.19%
Fridays	9.46%	16.95%	11.01%	21.86%	13.34%	11.99%	8.03%	9.80%	7.77%	6.94%	13.19%
Saturdays	8.92%	19.67%	10.49%	23.89%	12.56%	14.20%	7.34%	10.46%	8.97%	7.74%	12.71%
Overall	8.41%	16.35%	10.11%	22.20%	12.94%	12.80%	5.72%	9.79%	8.92%	6.50%	12.32%

Saskatchewan Emergency Medical Services (EMS) Development Project

Attachment J: Summary of 3-Year Prospective Simulation (Emergent and Non-Emergent Calls)

	Moosomin	Kipling	Swift Current	Whitewood	Broadview	Indian Head	Regina	Moose Jaw	Esterhazy	Fort Qu'Appelle	Central Butte
	121 31	124 30	137 25	153 30	154 30	156 30	159 23	161 20	183 30	187 30	194 30
Annual Calls											
Sundays	44.67	16.67	182.00	11.33	37.00	65.67	2,049.33	410.00	41.00	87.33	26.67
Mondays	57.33	22.00	192.33	18.00	34.67	78.00	2,669.67	503.67	56.00	84.00	26.00
Tuesdays	43.00	28.33	186.00	18.67	34.00	58.33	2,848.33	477.33	42.67	82.67	32.00
Wednesdays	56.67	27.00	200.00	19.00	44.00	52.67	2,836.00	506.67	45.67	63.33	15.00
Thursdays	51.00	36.33	201.67	16.67	45.33	68.67	2,994.33	487.00	44.33	81.00	19.33
Fridays	65.33	30.67	222.00	17.67	41.67	75.00	3,024.00	558.33	36.00	79.00	29.33
Saturdays	48.67	29.00	165.00	13.67	37.33	61.00	2,601.67	447.00	52.00	97.00	33.33
Overall	366.67	190.00	1,349.00	115.00	274.00	459.33	19,023.33	3,390.00	317.67	574.33	181.67
Unit-hrs used											
Each Sunday	2.14	1.12	8.07	0.62	2.52	2.38	55.12	10.32	2.15	2.37	1.52
Each Monday	2.73	1.58	8.07	0.89	1.98	2.69	71.11	12.50	2.91	2.55	1.68
Each Tuesday	2.05	1.76	7.58	0.79	2.19	1.97	79.08	12.06	2.29	2.26	1.66
Each Wednesday	2.51	1.31	8.96	0.88	2.46	1.80	78.14	12.41	2.11	1.85	1.22
Each Thursday	2.90	2.35	8.35	0.91	2.69	2.66	81.42	11.61	2.36	2.12	1.19
Each Friday	3.06	1.62	9.56	0.82	2.38	2.52	80.71	14.37	1.59	2.13	1.67
Each Saturday	2.89	1.52	7.34	0.65	1.95	2.35	67.42	11.14	3.02	2.96	1.93
Each Week	18.29	11.26	57.93	5.55	16.15	16.36	513.01	84.42	16.44	16.24	10.88
Each Year	950.99	585.63	3,012.14	288.34	839.91	850.82	26,676.33	4,389.74	854.99	844.37	565.63
Unit-hrs required (without consideration of minimum number of units at each site)											
Each Sunday	23	10	36	2	24	21	120	37	20	24	14
Each Monday	19	13	35	7	18	18	144	44	20	23	14
Each Tuesday	22	17	35	4	17	19	155	42	23	20	15
Each Wednesday	20	11	36	5	21	15	152	42	16	19	10
Each Thursday	22	18	36	8	21	20	156	43	17	22	10
Each Friday	22	18	35	4	20	17	157	48	14	22	17
Each Saturday	24	14	34	2	21	23	140	43	24	23	22
Each Week	152	101	247	32	142	133	1,024	299	134	153	102
Each Year	7,904	5,252	12,844	1,664	7,384	6,916	53,248	15,548	6,968	7,956	5,304

Saskatchewan Emergency Medical Services (EMS) Development Project

Attachment J: Summary of 3-Year Prospective Simulation (Emergent and Non-Emergent Calls)

	Moosomin 121 31	Kipling 124 30	Swift Current 137 25	Whitewood 153 30	Broadview 154 30	Indian Head 156 30	Regina 159 23	Moose Jaw 161 20	Esterhazy 183 30	Fort Qu'Appelle 187 30	Central Butte 194 30
Unit-hrs required (with consideration of minimum number of units at each site)											
Each Sunday	24	24	36	24	24	24	120	48	24	24	24
Each Monday	24	24	35	24	24	24	145	55	24	24	24
Each Tuesday	24	24	35	24	24	24	156	51	24	24	24
Each Wednesday	24	24	36	24	24	24	152	53	24	24	24
Each Thursday	24	24	36	24	24	24	156	52	24	24	24
Each Friday	24	24	35	24	24	24	157	55	24	24	24
Each Saturday	24	24	34	24	24	24	140	48	24	24	24
Each Week	168	168	247	168	168	168	1,026	362	168	168	168
Each Year	8,736	8,736	12,844	8,736	8,736	8,736	53,352	18,824	8,736	8,736	8,736
Units required (without consideration of minimum number of units at each site)											
0	9.52%	39.88%	-	80.95%	15.48%	20.83%	-	-	20.24%	8.93%	39.29%
1	90.48%	60.12%	52.98%	19.05%	84.52%	79.17%	-	37.50%	79.76%	91.07%	60.71%
2	-	-	47.02%	-	-	-	-	47.02%	-	-	-
3	-	-	-	-	-	-	1.19%	15.48%	-	-	-
4	-	-	-	-	-	-	19.05%	-	-	-	-
5	-	-	-	-	-	-	22.02%	-	-	-	-
6	-	-	-	-	-	-	19.05%	-	-	-	-
7	-	-	-	-	-	-	13.10%	-	-	-	-
8	-	-	-	-	-	-	16.67%	-	-	-	-
9	-	-	-	-	-	-	8.93%	-	-	-	-
10	-	-	-	-	-	-	-	-	-	-	-
11	-	-	-	-	-	-	-	-	-	-	-
12	-	-	-	-	-	-	-	-	-	-	-
13	-	-	-	-	-	-	-	-	-	-	-
14	-	-	-	-	-	-	-	-	-	-	-
15	-	-	-	-	-	-	-	-	-	-	-
16	-	-	-	-	-	-	-	-	-	-	-
17	-	-	-	-	-	-	-	-	-	-	-
18	-	-	-	-	-	-	-	-	-	-	-
19	-	-	-	-	-	-	-	-	-	-	-
20	-	-	-	-	-	-	-	-	-	-	-
	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Saskatchewan Emergency Medical Services (EMS) Development Project

Attachment J: Summary of 3-Year Prospective Simulation (Emergent and Non-Emergent Calls)

	Moosomin 121 31	Kipling 124 30	Swift Current 137 25	Whitewood 153 30	Broadview 154 30	Indian Head 156 30	Regina 159 23	Moose Jaw 161 20	Esterhazy 183 30	Fort Qu'Appelle 187 30	Central Butte 194 30
Pct. Of Minutes with some units in process											
Sundays	8.40%	4.54%	28.44%	2.51%	10.11%	9.39%	88.69%	34.04%	8.73%	9.37%	6.14%
Mondays	10.69%	6.30%	27.29%	3.52%	7.81%	10.54%	91.05%	38.04%	11.43%	9.82%	6.60%
Tuesdays	8.05%	7.22%	25.75%	3.24%	8.71%	7.67%	93.04%	37.89%	9.21%	9.01%	6.63%
Wednesdays	9.69%	5.40%	30.11%	3.46%	9.57%	7.33%	93.43%	38.17%	8.37%	7.51%	5.08%
Thursdays	11.72%	9.23%	28.64%	3.73%	10.55%	10.19%	92.97%	36.15%	9.62%	8.46%	4.84%
Fridays	11.79%	6.72%	32.12%	3.38%	9.23%	10.06%	93.07%	42.81%	6.15%	8.51%	6.85%
Saturdays	11.21%	6.10%	25.54%	2.59%	7.72%	9.35%	92.75%	36.64%	11.92%	11.47%	7.80%
Overall	10.22%	6.50%	28.27%	3.20%	9.10%	9.22%	92.14%	37.68%	9.35%	9.16%	6.28%

Saskatchewan Emergency Medical Services (EMS) Development Project

Attachment J: Summary of 3-Year Prospective Simulation (Emergent and Non-Emergent Calls)

	Melville	Cupar	Strasbourg	Leader	Yorkton	Leross	Davidson	Eston	Kamsack	Canora	Punnichy
	214 21	218 30	220 30	231 30	244 27	247 52	252 30	259 30	271 30	274 30	278 51
Annual Calls											
Sundays	48.67	22.33	25.33	20.67	237.33	41.67	36.33	22.67	82.00	68.00	53.67
Mondays	51.00	15.00	37.67	21.33	343.33	51.00	23.67	31.67	51.33	55.33	59.67
Tuesdays	62.33	16.00	31.67	16.67	362.00	49.33	28.67	25.67	83.00	65.67	38.00
Wednesdays	71.00	23.67	28.33	32.33	336.67	39.67	20.67	23.33	62.67	79.00	54.00
Thursdays	50.00	17.33	26.00	23.00	366.67	44.33	25.67	30.67	64.67	59.67	44.00
Fridays	62.00	15.33	36.00	28.33	368.67	68.00	27.67	27.33	95.00	64.33	56.33
Saturdays	45.67	28.33	33.67	21.67	300.00	56.00	27.00	28.67	79.33	78.33	60.67
Overall	390.67	138.00	218.67	164.00	2,314.67	350.00	189.67	190.00	518.00	470.33	366.33
Unit-hrs used											
Each Sunday	1.77	1.05	1.57	1.73	11.32	1.98	1.80	1.37	3.32	2.44	2.51
Each Monday	1.74	0.72	1.99	1.62	15.87	2.29	1.36	1.48	2.02	2.16	3.03
Each Tuesday	2.43	0.68	2.03	1.40	16.16	2.37	1.71	1.64	3.63	2.50	1.78
Each Wednesday	2.32	1.10	1.77	2.33	15.32	1.98	0.99	1.16	2.41	2.77	2.21
Each Thursday	1.97	0.82	1.52	1.72	16.24	1.84	1.54	1.51	2.64	2.53	1.98
Each Friday	2.11	0.74	2.08	2.31	16.32	3.00	1.54	1.60	3.58	2.48	2.47
Each Saturday	1.67	1.37	1.98	1.94	14.11	2.60	1.61	1.54	3.12	2.58	2.78
Each Week	14.01	6.49	12.94	13.05	105.33	16.05	10.56	10.31	20.72	17.45	16.77
Each Year	728.51	337.36	672.62	678.68	5,477.34	834.79	548.95	536.06	1,077.19	907.35	872.24
Unit-hrs required (without consideration of minimum number of units at each site)											
Each Sunday	19	8	18	20	43	18	15	14	24	22	23
Each Monday	15	5	16	19	48	22	13	13	16	19	24
Each Tuesday	19	4	19	17	50	19	15	17	24	16	19
Each Wednesday	17	4	16	19	48	18	8	7	23	23	19
Each Thursday	15	6	14	19	51	15	16	15	21	24	19
Each Friday	15	2	19	20	51	19	13	15	23	16	20
Each Saturday	17	14	19	21	46	23	18	19	24	21	24
Each Week	117	43	121	135	337	134	98	100	155	141	148
Each Year	6,084	2,236	6,292	7,020	17,524	6,968	5,096	5,200	8,060	7,332	7,696

Saskatchewan Emergency Medical Services (EMS) Development Project

Attachment J: Summary of 3-Year Prospective Simulation (Emergent and Non-Emergent Calls)

	Melville	Cupar	Strasbourg	Leader	Yorkton	Leross	Davidson	Eston	Kamsack	Canora	Punnichy
	214 21	218 30	220 30	231 30	244 27	247 52	252 30	259 30	271 30	274 30	278 51
Unit-hrs required (with consideration of minimum number of units at each site)											
Each Sunday	24	24	24	24	43	24	24	24	24	24	24
Each Monday	24	24	24	24	48	24	24	24	24	24	24
Each Tuesday	24	24	24	24	50	24	24	24	24	24	24
Each Wednesday	24	24	24	24	48	24	24	24	24	24	24
Each Thursday	24	24	24	24	51	24	24	24	24	24	24
Each Friday	24	24	24	24	51	24	24	24	24	24	24
Each Saturday	24	24	24	24	46	24	24	24	24	24	24
Each Week	168	168	168	168	337	168	168	168	168	168	168
Each Year	8,736	8,736	8,736	8,736	17,524	8,736	8,736	8,736	8,736	8,736	8,736
Units required (without consideration of minimum number of units at each site)											
0	30.36%	74.40%	27.98%	19.64%	-	20.24%	41.67%	40.48%	7.74%	16.07%	11.90%
1	69.64%	25.60%	72.02%	80.36%	27.98%	79.76%	58.33%	59.52%	92.26%	83.93%	88.10%
2	-	-	-	-	43.45%	-	-	-	-	-	-
3	-	-	-	-	28.57%	-	-	-	-	-	-
4	-	-	-	-	-	-	-	-	-	-	-
5	-	-	-	-	-	-	-	-	-	-	-
6	-	-	-	-	-	-	-	-	-	-	-
7	-	-	-	-	-	-	-	-	-	-	-
8	-	-	-	-	-	-	-	-	-	-	-
9	-	-	-	-	-	-	-	-	-	-	-
10	-	-	-	-	-	-	-	-	-	-	-
11	-	-	-	-	-	-	-	-	-	-	-
12	-	-	-	-	-	-	-	-	-	-	-
13	-	-	-	-	-	-	-	-	-	-	-
14	-	-	-	-	-	-	-	-	-	-	-
15	-	-	-	-	-	-	-	-	-	-	-
16	-	-	-	-	-	-	-	-	-	-	-
17	-	-	-	-	-	-	-	-	-	-	-
18	-	-	-	-	-	-	-	-	-	-	-
19	-	-	-	-	-	-	-	-	-	-	-
20	-	-	-	-	-	-	-	-	-	-	-
	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Saskatchewan Emergency Medical Services (EMS) Development Project

Attachment J: Summary of 3-Year Prospective Simulation (Emergent and Non-Emergent Calls)

	Melville	Cupar	Strasbourg	Leader	Yorkton	Leross	Davidson	Eston	Kamsack	Canora	Punnichy
	214 21	218 30	220 30	231 30	244 27	247 52	252 30	259 30	271 30	274 30	278 51
Pct. Of Minutes with some units in process											
Sundays	7.14%	4.20%	6.46%	6.98%	36.09%	8.00%	7.09%	5.48%	12.54%	9.68%	10.04%
Mondays	7.08%	2.99%	7.74%	6.45%	46.09%	8.99%	5.56%	5.79%	7.79%	8.56%	11.87%
Tuesdays	9.48%	2.82%	8.00%	5.80%	45.40%	9.18%	7.03%	6.66%	13.57%	9.54%	7.12%
Wednesdays	8.93%	4.32%	7.07%	9.03%	45.87%	7.90%	3.95%	4.79%	9.44%	10.43%	8.74%
Thursdays	7.93%	3.23%	6.04%	7.09%	46.28%	7.42%	6.18%	6.08%	10.44%	9.97%	7.80%
Fridays	8.01%	3.05%	8.38%	9.15%	45.30%	11.40%	6.21%	6.33%	13.97%	9.68%	9.69%
Saturdays	6.72%	5.53%	8.05%	7.49%	43.21%	10.25%	6.55%	6.23%	11.74%	10.08%	11.05%
Overall	7.90%	3.74%	7.39%	7.43%	44.03%	9.02%	6.08%	5.91%	11.36%	9.70%	9.47%

Saskatchewan Emergency Medical Services (EMS) Development Project

Attachment J: Summary of 3-Year Prospective Simulation (Emergent and Non-Emergent Calls)

	Outlook	Rosetown	Kindersley	Elfros	Watrous	Preeceville	Watson	Saskatoon	Biggar	Kerrobert	Kelvington
	284 30	287 30	290 30	307 50	312 30	334 30	338 30	344 24	347 30	351 30	366 30
Annual Calls											
Sundays	22.00	38.00	37.33	78.00	30.67	52.33	31.00	2,143.67	27.67	34.00	54.00
Mondays	48.67	36.67	32.67	96.00	22.33	51.33	32.67	2,569.33	31.33	22.00	44.33
Tuesdays	29.00	44.67	37.33	81.00	28.67	47.67	37.00	2,694.00	40.00	35.67	49.67
Wednesdays	33.33	42.00	40.67	98.00	29.00	48.00	34.67	2,769.00	51.67	22.00	56.67
Thursdays	22.67	45.00	46.00	85.33	33.00	48.33	27.33	2,858.00	30.00	29.33	58.67
Fridays	29.00	44.67	46.33	91.67	34.67	41.67	38.00	2,941.67	40.67	31.33	50.33
Saturdays	42.33	48.33	45.00	88.67	30.67	51.00	37.00	2,485.33	32.00	21.00	67.67
Overall	227.00	299.33	285.33	618.67	209.00	340.33	237.67	18,461.00	253.33	195.33	381.33
Unit-hrs used											
Each Sunday	1.26	2.02	2.57	5.33	1.73	3.27	1.77	65.77	1.26	2.25	2.66
Each Monday	2.19	1.89	1.84	5.91	1.44	3.80	1.92	83.15	1.52	1.59	2.37
Each Tuesday	1.47	2.24	2.00	4.65	1.34	3.31	2.05	85.86	1.68	2.21	3.08
Each Wednesday	1.80	2.46	2.37	5.79	1.58	3.55	1.85	88.06	1.91	1.63	3.19
Each Thursday	1.02	2.63	2.94	5.77	1.54	3.09	1.46	92.99	1.20	2.25	3.20
Each Friday	1.26	2.53	3.13	5.46	1.74	2.72	1.99	92.96	1.51	2.00	3.32
Each Saturday	2.14	3.00	2.62	5.80	1.48	3.29	2.28	75.99	1.30	1.84	3.58
Each Week	11.13	16.77	17.47	38.71	10.85	23.02	13.32	584.78	10.38	13.77	21.40
Each Year	578.96	872.02	908.69	2,012.81	564.11	1,197.09	692.86	30,408.71	539.60	715.86	1,112.85
Unit-hrs required (without consideration of minimum number of units at each site)											
Each Sunday	10	16	23	28	16	24	16	135	9	22	24
Each Monday	16	15	18	28	12	23	16	159	14	15	21
Each Tuesday	16	17	17	25	13	24	19	162	14	15	22
Each Wednesday	15	17	16	24	15	24	16	164	18	15	24
Each Thursday	8	18	17	26	15	24	13	173	12	20	24
Each Friday	13	19	23	27	17	24	17	171	14	16	24
Each Saturday	16	21	21	25	15	24	23	152	10	19	24
Each Week	94	123	135	183	103	167	120	1,116	91	122	163
Each Year	4,888	6,396	7,020	9,516	5,356	8,684	6,240	58,032	4,732	6,344	8,476

Saskatchewan Emergency Medical Services (EMS) Development Project

Attachment J: Summary of 3-Year Prospective Simulation (Emergent and Non-Emergent Calls)

	Outlook	Rosetown	Kindersley	Elfros	Watrous	Preeceville	Watson	Saskatoon	Biggar	Kerrobert	Kelvington
	284 30	287 30	290 30	307 50	312 30	334 30	338 30	344 24	347 30	351 30	366 30
Unit-hrs required (with consideration of minimum number of units at each site)											
Each Sunday	24	24	24	28	24	24	24	135	24	24	24
Each Monday	24	24	24	28	24	24	24	159	24	24	24
Each Tuesday	24	24	24	25	24	24	24	162	24	24	24
Each Wednesday	24	24	24	24	24	24	24	164	24	24	24
Each Thursday	24	24	24	26	24	24	24	173	24	24	24
Each Friday	24	24	24	27	24	24	24	171	24	24	24
Each Saturday	24	24	24	25	24	24	24	152	24	24	24
Each Week	168	168	168	183	168	168	168	1,116	168	168	168
Each Year	8,736	8,736	8,736	9,516	8,736	8,736	8,736	58,032	8,736	8,736	8,736
Units required (without consideration of minimum number of units at each site)											
0	44.05%	26.79%	19.64%	-	38.69%	0.60%	28.57%	-	45.83%	27.38%	2.98%
1	55.95%	73.21%	80.36%	91.07%	61.31%	99.40%	71.43%	-	54.17%	72.62%	97.02%
2	-	-	-	8.93%	-	-	-	-	-	-	-
3	-	-	-	-	-	-	-	-	-	-	-
4	-	-	-	-	-	-	-	13.69%	-	-	-
5	-	-	-	-	-	-	-	19.05%	-	-	-
6	-	-	-	-	-	-	-	17.26%	-	-	-
7	-	-	-	-	-	-	-	16.67%	-	-	-
8	-	-	-	-	-	-	-	13.69%	-	-	-
9	-	-	-	-	-	-	-	13.69%	-	-	-
10	-	-	-	-	-	-	-	4.17%	-	-	-
11	-	-	-	-	-	-	-	1.79%	-	-	-
12	-	-	-	-	-	-	-	-	-	-	-
13	-	-	-	-	-	-	-	-	-	-	-
14	-	-	-	-	-	-	-	-	-	-	-
15	-	-	-	-	-	-	-	-	-	-	-
16	-	-	-	-	-	-	-	-	-	-	-
17	-	-	-	-	-	-	-	-	-	-	-
18	-	-	-	-	-	-	-	-	-	-	-
19	-	-	-	-	-	-	-	-	-	-	-
20	-	-	-	-	-	-	-	-	-	-	-
	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Saskatchewan Emergency Medical Services (EMS) Development Project

Attachment J: Summary of 3-Year Prospective Simulation (Emergent and Non-Emergent Calls)

	Outlook 284 30	Rosetown 287 30	Kindersley 290 30	Elfros 307 50	Watrous 312 30	Preeceville 334 30	Watson 338 30	Saskatoon 344 24	Biggar 347 30	Kerrobert 351 30	Kelvington 366 30
Pct. Of Minutes with some units in process											
Sundays	5.13%	7.87%	10.27%	19.66%	7.03%	12.67%	6.99%	93.05%	5.05%	9.23%	10.72%
Mondays	8.51%	7.18%	7.35%	21.90%	5.87%	14.62%	7.60%	93.61%	6.07%	6.31%	9.39%
Tuesdays	6.02%	8.90%	7.70%	17.36%	5.38%	12.67%	8.07%	93.96%	6.88%	8.55%	11.98%
Wednesdays	7.20%	9.76%	9.28%	21.70%	6.21%	13.72%	7.22%	94.36%	7.69%	6.42%	12.53%
Thursdays	4.22%	10.25%	11.17%	21.40%	5.89%	11.77%	5.90%	95.39%	4.86%	8.94%	12.76%
Fridays	5.12%	10.04%	11.92%	20.07%	6.82%	10.51%	7.73%	94.70%	6.02%	8.04%	12.90%
Saturdays	8.26%	11.71%	10.18%	21.75%	5.91%	12.96%	8.98%	94.61%	5.24%	7.40%	13.84%
Overall	6.35%	9.39%	9.70%	20.55%	6.16%	12.70%	7.50%	94.24%	5.97%	7.84%	12.02%

Saskatchewan Emergency Medical Services (EMS) Development Project

Attachment J: Summary of 3-Year Prospective Simulation (Emergent and Non-Emergent Calls)

	Humboldt	Hudson Bay	Porcupine Plain	Wakaw	Rosthern	Unity	Tisdale	Melfort	Blaine Lake	North Battleford	Cut Knife
	370 30	394 30	395 30	401 30	403 30	410 30	427 30	428 20	434 30	437 21	439 30
Annual Calls											
Sundays	66.67	12.33	16.67	35.67	44.67	47.33	47.33	76.33	37.00	272.00	15.33
Mondays	73.67	17.67	8.67	25.00	39.00	43.33	62.33	95.67	29.67	289.33	12.00
Tuesdays	81.67	19.33	14.00	20.00	41.67	46.67	87.00	98.67	33.33	303.00	21.00
Wednesdays	74.33	21.00	17.67	33.67	38.00	46.67	56.67	105.33	40.00	306.33	20.33
Thursdays	68.67	15.00	20.33	32.00	42.00	42.33	62.00	94.00	37.33	282.33	11.00
Fridays	95.00	15.67	22.33	24.67	51.33	67.33	67.33	108.33	40.67	298.67	28.00
Saturdays	75.00	20.00	13.67	27.67	56.00	61.00	57.67	73.33	44.67	316.67	18.33
Overall	535.00	121.00	113.33	198.67	312.67	354.67	440.33	651.67	262.67	2,068.33	126.00
Unit-hrs used											
Each Sunday	2.09	0.88	1.31	1.63	1.35	4.47	3.28	3.19	2.10	8.74	0.84
Each Monday	2.38	1.04	0.60	1.12	1.04	3.27	4.35	4.04	1.67	8.33	0.65
Each Tuesday	2.55	1.22	0.63	0.88	1.14	3.97	6.09	3.95	1.91	8.72	1.01
Each Wednesday	2.10	1.60	0.92	1.25	1.06	3.93	4.72	4.40	2.37	9.21	1.17
Each Thursday	2.40	0.95	0.89	1.45	1.21	3.40	4.55	3.76	2.15	8.59	0.65
Each Friday	2.85	0.98	1.54	1.08	1.55	4.64	4.12	4.39	2.55	9.11	1.38
Each Saturday	2.63	1.34	0.99	0.97	1.63	4.37	3.54	3.24	2.44	9.85	1.01
Each Week	16.99	8.01	6.88	8.38	8.98	28.04	30.63	26.97	15.19	62.55	6.71
Each Year	883.39	416.74	357.90	435.89	467.07	1,458.26	1,592.93	1,402.49	789.91	3,252.52	348.70
Unit-hrs required (without consideration of minimum number of units at each site)											
Each Sunday	22	1	12	15	11	24	24	24	18	34	6
Each Monday	21	7	1	12	10	18	20	24	16	37	2
Each Tuesday	20	11	1	7	9	24	32	18	22	34	6
Each Wednesday	17	18	3	11	10	24	24	24	20	37	9
Each Thursday	18	9	9	15	12	24	23	24	18	38	3
Each Friday	21	10	16	10	16	20	21	24	22	38	14
Each Saturday	22	12	4	8	20	24	24	23	20	39	9
Each Week	141	68	46	78	88	158	168	161	136	257	49
Each Year	7,332	3,536	2,392	4,056	4,576	8,216	8,736	8,372	7,072	13,364	2,548

Saskatchewan Emergency Medical Services (EMS) Development Project

Attachment J: Summary of 3-Year Prospective Simulation (Emergent and Non-Emergent Calls)

	Humboldt	Hudson Bay	Porcupine Plain	Wakaw	Rosthern	Unity	Tisdale	Melfort	Blaine Lake	North Battleford	Cut Knife
	370 30	394 30	395 30	401 30	403 30	410 30	427 30	428 20	434 30	437 21	439 30
Unit-hrs required (with consideration of minimum number of units at each site)											
Each Sunday	24	24	24	24	24	24	24	24	24	48	24
Each Monday	24	24	24	24	24	24	24	24	24	48	24
Each Tuesday	24	24	24	24	24	24	32	24	24	48	24
Each Wednesday	24	24	24	24	24	24	24	24	24	48	24
Each Thursday	24	24	24	24	24	24	24	24	24	48	24
Each Friday	24	24	24	24	24	24	25	24	24	48	24
Each Saturday	24	24	24	24	24	24	24	24	24	48	24
Each Week	168	168	168	168	168	168	177	168	168	336	168
Each Year	8,736	8,736	8,736	8,736	8,736	8,736	9,204	8,736	8,736	17,472	8,736
Units required (without consideration of minimum number of units at each site)											
0	16.07%	59.52%	72.62%	53.57%	47.62%	5.95%	5.36%	4.17%	19.05%	-	70.83%
1	83.93%	40.48%	27.38%	46.43%	52.38%	94.05%	89.29%	95.83%	80.95%	47.02%	29.17%
2	-	-	-	-	-	-	5.36%	-	-	52.98%	-
3	-	-	-	-	-	-	-	-	-	-	-
4	-	-	-	-	-	-	-	-	-	-	-
5	-	-	-	-	-	-	-	-	-	-	-
6	-	-	-	-	-	-	-	-	-	-	-
7	-	-	-	-	-	-	-	-	-	-	-
8	-	-	-	-	-	-	-	-	-	-	-
9	-	-	-	-	-	-	-	-	-	-	-
10	-	-	-	-	-	-	-	-	-	-	-
11	-	-	-	-	-	-	-	-	-	-	-
12	-	-	-	-	-	-	-	-	-	-	-
13	-	-	-	-	-	-	-	-	-	-	-
14	-	-	-	-	-	-	-	-	-	-	-
15	-	-	-	-	-	-	-	-	-	-	-
16	-	-	-	-	-	-	-	-	-	-	-
17	-	-	-	-	-	-	-	-	-	-	-
18	-	-	-	-	-	-	-	-	-	-	-
19	-	-	-	-	-	-	-	-	-	-	-
20	-	-	-	-	-	-	-	-	-	-	-
	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Saskatchewan Emergency Medical Services (EMS) Development Project

Attachment J: Summary of 3-Year Prospective Simulation (Emergent and Non-Emergent Calls)

	Humboldt 370 30	Hudson Bay 394 30	Porcupine Plain 395 30	Wakaw 401 30	Rosthern 403 30	Unity 410 30	Tisdale 427 30	Melfort 428 20	Blaine Lake 434 30	North Battleford 437 21	Cut Knife 439 30
Pct. Of Minutes with some units in process											
Sundays	8.19%	3.66%	5.27%	6.11%	5.50%	17.21%	12.80%	12.58%	8.22%	31.04%	3.49%
Mondays	9.38%	4.23%	2.37%	4.61%	4.29%	12.66%	16.04%	15.27%	6.69%	29.08%	2.67%
Tuesdays	10.21%	4.94%	2.56%	3.63%	4.70%	15.11%	20.76%	14.78%	7.89%	30.25%	4.20%
Wednesdays	8.30%	6.44%	3.79%	4.91%	4.33%	14.89%	17.30%	16.62%	9.27%	31.01%	4.67%
Thursdays	9.30%	3.94%	3.52%	5.93%	4.90%	12.99%	16.86%	14.33%	8.66%	28.97%	2.67%
Fridays	10.80%	3.75%	6.33%	4.49%	6.27%	17.17%	15.49%	16.61%	10.23%	29.91%	5.64%
Saturdays	10.36%	5.51%	3.95%	4.06%	6.52%	16.62%	13.78%	12.61%	9.55%	32.99%	4.16%
Overall	9.51%	4.64%	3.97%	4.82%	5.22%	15.24%	16.15%	14.69%	8.64%	30.47%	3.93%

Saskatchewan Emergency Medical Services (EMS) Development Project

Attachment J: Summary of 3-Year Prospective Simulation (Emergent and Non-Emergent Calls)

	Prince Albert 461 22	Maidstone 471 30	Carrot River 486 30	Nipawin 487 30	Shellbrook 493 30	Canwood 494 51	Spiritwood 496 30	St. Walburg 501 30	Lloydminster 502 29	Big River 555 30	Loon Lake 561 58
Annual Calls											
Sundays	601.00	17.00	46.33	80.33	40.33	40.33	52.33	124.00	75.67	18.67	13.00
Mondays	525.67	17.33	37.67	73.00	33.67	35.00	35.33	104.00	62.67	18.33	22.33
Tuesdays	593.33	16.33	34.00	79.00	32.00	35.33	39.33	87.67	73.00	12.00	19.00
Wednesdays	572.00	21.00	44.67	82.67	39.00	27.33	52.00	101.00	74.67	14.00	23.00
Thursdays	621.67	16.33	36.00	66.67	35.33	37.67	47.33	89.00	73.00	17.33	16.00
Fridays	627.67	26.67	44.33	81.00	44.00	40.33	59.00	101.67	70.33	20.00	26.00
Saturdays	722.33	18.67	50.33	90.00	36.67	46.33	58.33	118.67	84.00	28.67	20.67
Overall	4,263.67	133.33	293.33	552.67	261.00	262.33	343.67	726.00	513.33	129.00	140.00
Unit-hrs used											
Each Sunday	15.17	1.02	2.60	3.88	1.90	1.89	3.18	8.11	3.91	1.36	1.30
Each Monday	13.30	0.92	2.13	3.06	1.97	1.60	1.94	6.85	3.55	1.22	2.21
Each Tuesday	15.62	0.88	1.72	3.49	1.65	1.60	2.38	5.62	3.37	0.81	1.50
Each Wednesday	14.58	1.34	2.36	3.23	2.08	1.24	2.90	6.04	4.23	0.95	1.88
Each Thursday	15.38	1.25	2.22	2.99	1.88	1.75	2.48	6.03	3.85	0.98	1.40
Each Friday	14.92	1.55	2.57	3.86	2.28	1.89	2.94	6.60	3.14	1.33	2.27
Each Saturday	16.62	1.23	2.44	3.92	1.74	2.17	3.16	7.72	4.10	2.09	1.85
Each Week	105.58	8.18	16.03	24.42	13.50	12.15	18.99	46.97	26.14	8.74	12.41
Each Year	5,490.22	425.53	833.63	1,269.76	702.19	631.91	987.51	2,442.28	1,359.30	454.32	645.33
Unit-hrs required (without consideration of minimum number of units at each site)											
Each Sunday	51	10	24	20	18	20	24	37	24	16	13
Each Monday	42	9	18	20	21	14	22	30	24	11	22
Each Tuesday	57	6	15	24	19	17	22	24	24	6	15
Each Wednesday	51	13	24	20	23	12	24	30	24	7	22
Each Thursday	49	13	22	23	17	19	22	26	24	8	13
Each Friday	52	14	20	25	22	17	22	31	24	14	23
Each Saturday	56	12	17	24	19	19	24	37	24	14	17
Each Week	358	77	140	156	139	118	160	215	168	76	125
Each Year	18,616	4,004	7,280	8,112	7,228	6,136	8,320	11,180	8,736	3,952	6,500

Saskatchewan Emergency Medical Services (EMS) Development Project

Attachment J: Summary of 3-Year Prospective Simulation (Emergent and Non-Emergent Calls)

	Prince Albert 461 22	Maidstone 471 30	Carrot River 486 30	Nipawin 487 30	Shellbrook 493 30	Canwood 494 51	Spiritwood 496 30	St. Walburg 501 30	Lloydminster 502 29	Big River 555 30	Loon Lake 561 58
Unit-hrs required (with consideration of minimum number of units at each site)											
Each Sunday	51	24	24	24	24	24	24	37	24	24	24
Each Monday	49	24	24	24	24	24	24	30	24	24	24
Each Tuesday	57	24	24	24	24	24	24	24	24	24	24
Each Wednesday	55	24	24	24	24	24	24	30	24	24	24
Each Thursday	54	24	24	24	24	24	24	26	24	24	24
Each Friday	55	24	24	25	24	24	24	31	24	24	24
Each Saturday	58	24	24	24	24	24	24	37	24	24	24
Each Week	379	168	168	169	168	168	168	215	168	168	168
Each Year	19,708	8,736	8,736	8,788	8,736	8,736	8,736	11,180	8,736	8,736	8,736
Units required (without consideration of minimum number of units at each site)											
0	-	54.17%	16.67%	7.74%	17.26%	29.76%	4.76%	-	-	54.76%	25.60%
1	12.50%	45.83%	83.33%	91.67%	82.74%	70.24%	95.24%	72.02%	100.00%	45.24%	74.40%
2	61.90%	-	-	0.60%	-	-	-	27.98%	-	-	-
3	25.60%	-	-	-	-	-	-	-	-	-	-
4	-	-	-	-	-	-	-	-	-	-	-
5	-	-	-	-	-	-	-	-	-	-	-
6	-	-	-	-	-	-	-	-	-	-	-
7	-	-	-	-	-	-	-	-	-	-	-
8	-	-	-	-	-	-	-	-	-	-	-
9	-	-	-	-	-	-	-	-	-	-	-
10	-	-	-	-	-	-	-	-	-	-	-
11	-	-	-	-	-	-	-	-	-	-	-
12	-	-	-	-	-	-	-	-	-	-	-
13	-	-	-	-	-	-	-	-	-	-	-
14	-	-	-	-	-	-	-	-	-	-	-
15	-	-	-	-	-	-	-	-	-	-	-
16	-	-	-	-	-	-	-	-	-	-	-
17	-	-	-	-	-	-	-	-	-	-	-
18	-	-	-	-	-	-	-	-	-	-	-
19	-	-	-	-	-	-	-	-	-	-	-
20	-	-	-	-	-	-	-	-	-	-	-
	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Saskatchewan Emergency Medical Services (EMS) Development Project

Attachment J: Summary of 3-Year Prospective Simulation (Emergent and Non-Emergent Calls)

Pct. Of Minutes with some units in process	Prince Albert 461 22	Maidstone 471 30	Carrot River 486 30	Nipawin 487 30	Shellbrook 493 30	Canwood 494 51	Spiritwood 496 30	St. Walburg 501 30	Lloydminster 502 29	Big River 555 30	Loon Lake 561 58
Sundays	45.76%	4.18%	10.11%	14.01%	7.34%	7.56%	12.35%	27.97%	14.43%	5.64%	5.24%
Mondays	41.78%	3.71%	8.47%	11.49%	7.73%	6.35%	7.61%	24.48%	13.81%	4.75%	8.80%
Tuesdays	46.19%	3.59%	6.93%	13.68%	6.44%	6.42%	9.53%	21.23%	13.10%	3.34%	5.96%
Wednesdays	44.12%	5.48%	9.51%	12.62%	8.08%	5.09%	11.18%	21.83%	16.29%	3.95%	7.46%
Thursdays	46.40%	5.15%	8.66%	11.44%	7.44%	7.11%	9.88%	22.27%	14.75%	3.96%	5.60%
Fridays	44.78%	6.26%	10.07%	14.50%	8.94%	7.61%	11.57%	24.09%	12.33%	5.37%	9.23%
Saturdays	48.97%	4.91%	9.67%	14.82%	7.08%	8.71%	12.43%	26.27%	16.08%	8.18%	7.44%
Overall	45.43%	4.75%	9.06%	13.22%	7.58%	6.98%	10.65%	24.02%	14.40%	5.03%	7.10%

Saskatchewan Emergency Medical Services (EMS) Development Project

Attachment J: Summary of 3-Year Prospective Simulation (Emergent and Non-Emergent Calls)

	Meadow Lake 588 30	All Sites (67)
Annual Calls		
Sundays	66.67	8,670.33
Mondays	75.33	9,836.33
Tuesdays	72.00	10,277.33
Wednesdays	72.67	10,358.33
Thursdays	66.67	10,595.00
Fridays	87.67	11,159.67
Saturdays	83.67	10,100.00
Overall	524.67	70,997.00
Unit-hrs used		
Each Sunday	3.46	319.45
Each Monday	3.67	353.16
Each Tuesday	3.92	367.10
Each Wednesday	3.69	369.63
Each Thursday	3.73	377.22
Each Friday	4.87	393.85
Each Saturday	4.76	361.02
Each Week	28.09	2,541.42
Each Year	1,460.63	132,153.92
Unit-hrs required **(without consideration of minimum number of units at each site)**		
Each Sunday	24	1,576
Each Monday	24	1,548
Each Tuesday	24	1,594
Each Wednesday	24	1,576
Each Thursday	24	1,610
Each Friday	24	1,684
Each Saturday	24	1,699
Each Week	168	11,287
Each Year	8,736	586,924

Saskatchewan Emergency Medical Services (EMS) Development Project

Attachment J: Summary of 3-Year Prospective Simulation (Emergent and Non-Emergent Calls)

	Meadow Lake 588 30	All Sites (67)
Unit-hrs required **(with consideration of minimum number of units at each site)**		
Each Sunday	24	1,944
Each Monday	24	1,992
Each Tuesday	24	2,010
Each Wednesday	24	2,002
Each Thursday	24	2,018
Each Friday	24	2,026
Each Saturday	24	1,985
Each Week	168	13,977
Each Year	8,736	726,804

Units required **(without consideration of minimum number of units at each site)**	
0	-
1	100.00%
2	-
3	-
4	-
5	-
6	-
7	-
8	-
9	-
10	-
11	-
12	-
13	-
14	-
15	-
16	-
17	-
18	-
19	-
20	-
	100.00%

Saskatchewan Emergency Medical Services (EMS) Development Project

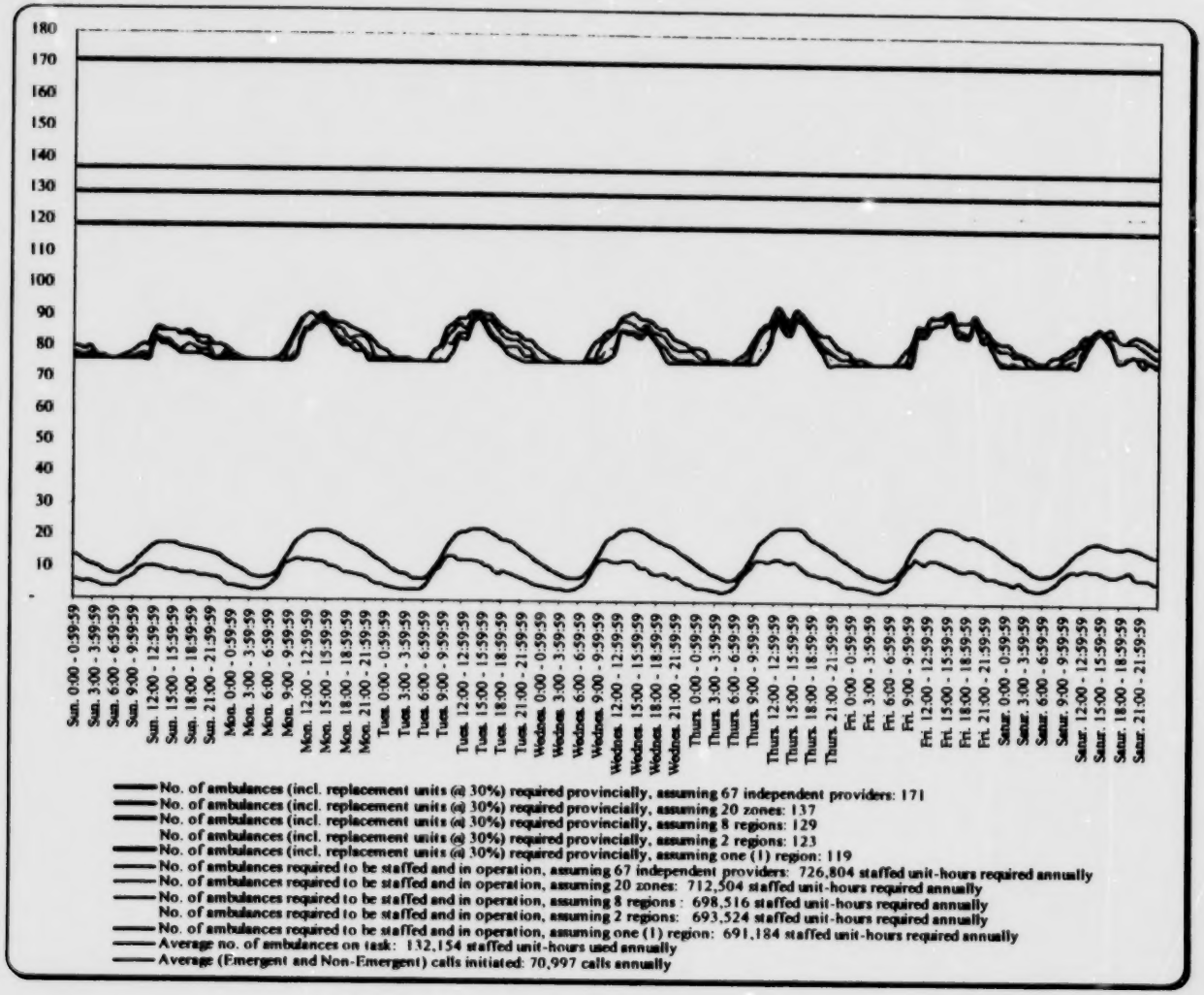
Attachment J: Summary of 3-Year Prospective Simulation (Emergent and Non-Emergent Calls)

Meadow Lake	All Sites
588 30	(67)

Pct. Of Minutes with some units in process	
Sundays	13.40%
Mondays	14.07%
Tuesdays	15.25%
Wednesdays	14.28%
Thursdays	14.22%
Fridays	17.54%
Saturdays	18.36%
Overall	15.30%

Saskatchewan Emergency Medical Services (EMS) Development Project

Simulation Summary - Key Cost Drivers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120
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Thurs. 12:00 - 12:59:59
Thurs. 15:00 - 15:59:59
Thurs. 18:00 - 18:59:59
Thurs. 21:00 - 21:59:59
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Fri. 6:00 - 6:59:59
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Fri. 15:00 - 15:59:59
Fri. 18:00 - 18:59:59
Fri. 21:00 - 21:59:59
Satur. 0:00 - 0:59:59
Satur. 3:00 - 3:59:59
Satur. 6:00 - 6:59:59
Satur. 9:00 - 9:59:59
Satur. 12:00 - 12:59:59
Satur. 15:00 - 15:59:59
Satur. 18:00 - 18:59:59
Satur. 21:00 - 21:59:59
No. of ambulances (incl. replacement units (@ 30%) required provincially, assuming 67 independent providers: 171
No. of ambulances (incl. replacement units (@ 30%) required provincially, assuming 20 zones: 137
No. of ambulances (incl. replacement units (@ 30%) required provincially, assuming 8 regions: 129
No. of ambulances (incl. replacement units (@ 30%) required provincially, assuming 2 regions: 123
No. of ambulances (incl. replacement units (@ 30%) required provincially, assuming one (1) region: 119
No. of ambulances required to be staffed and in operation, assuming 67 independent providers: 726,804 staffed unit-hours required annually
No. of ambulances required to be staffed and in operation, assuming 20 zones: 712,504 staffed unit-hours required annually
No. of ambulances required to be staffed and in operation, assuming 8 regions: 698,516 staffed unit-hours required annually
No. of ambulances required to be staffed and in operation, assuming 2 regions: 693,524 staffed unit-hours required annually
No. of ambulances required to be staffed and in operation, assuming one (1) region: 691,184 staffed unit-hours required annually
Average no. of ambulances on task: 132,154 staffed unit-hours used annually
Average (Emergent and Non-Emergent) calls initiated: 70,997 calls annually

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Saskatchewan Emergency Medical Services (EMS) Development Project

Attachment K

Summary of Key Operating and Cost Statistics (All Calls)

	003 30 Oxbow	005 28 Estevan	040 30 Bengough	063 30 Carlyle	067 26 Weyburn
KEY OPERATING STATISTICS					
Those that Directly Impact Cost Calculation					
Annual (emergent and non-emergent) calls	230.33	703.00	254.33	700.33	931.67
Unit-hrs. used	766.36	1,572.90	934.28	2,209.27	1,232.12
Unit-hrs. required	8,736.00	8,736.00	8,736.00	9,776.00	8,840.00
Field staff mix:					
E.M.R	-	-	-	-	-
E.M.T	100%	50%	100%	50%	50%
E.M.T.A	-	50%	-	50%	50%
E.M.T.P	-	-	-	-	-
Ambulances (including inventory @ 30%)	2	2	2	3	3
No. of Stations	1	1	1	1	1
Estimated kilometres per unit-hr used	44.9	48.8	50.2	48.9	45.6
Estimated kilometres	34,406	76,777	46,943	107,987	56,132
Those that Do Not Directly Impact Cost Calculation					
Average Pct. Time on Task (also referred to as Unit-hour Utilization (UhU))	8.77%	18.00%	10.69%	22.60%	13.94%
Average Time-on-Task (hrs.)	3.33	2.24	3.67	3.15	1.32
Calls per Unit-Hour	0.0264	0.0805	0.0291	0.0716	0.1054
Average annual kilometres per ambulance	17,203	38,389	23,472	35,996	18,711
Total (Ambulances and Supervisory) Vehicles	3	3	3	4	4
STAFFING AND ANNUAL OPERATING EXPENSES					
FIELD STAFF					
Regular Full-Time Equivalents (FTE's)					
E.M.R	-	-	-	-	-
E.M.T	8.00	4.00	8.00	4.48	4.05
E.M.T.A	-	4.00	-	4.48	4.05
E.M.T.P	-	-	-	-	-
	8.00	8.00	8.00	8.95	8.10
Relief Full-Time Equivalents (FTE's)					
E.M.R	-	-	-	-	-
E.M.T	1.61	0.80	1.61	0.90	0.81
E.M.T.A	-	0.80	-	0.90	0.81
E.M.T.P	-	-	-	-	-
	1.61	1.61	1.61	1.80	1.63

Saskatchewan Emergency Medical Services (EMS) Development Project

Attachment K

Summary of Key Operating and Cost Statistics (All Calls)

	003 30	005 28	040 30	063 30	067 26
	Oxbow	Estevan	Bengough	Carlyle	Weyburn
Regular and Relief Full-Time Equivalents (FTE's)					
E.M.R	-	-	-	-	-
E.M.T	9.61	4.80	9.61	5.38	4.86
E.M.T.A	-	4.80	-	5.38	4.86
E.M.T.P	-	-	-	-	-
	9.61	9.61	9.61	10.75	9.72
ADMINISTRATIVE PERSONNEL (FTE'S)					
Director	-	-	-	-	-
Finance Director	-	-	-	-	-
Billing/Collection Manager	-	-	-	-	-
Billing & Collection Clerical	1.00	1.00	1.00	1.00	1.00
Admin Asst.	0.50	0.50	0.50	0.50	0.50
Admin Support	-	-	-	-	-
Community Support	-	-	-	-	-
Quality/Training Officer	0.50	0.50	0.50	0.50	0.50
MIS Coordinator	-	-	-	-	-
MIS Staff	-	-	-	-	-
	2.00	2.00	2.00	2.00	2.00
OPERATIONS PERSONNEL (FTE'S)					
Operations Manager	1.00	1.00	1.00	1.00	1.00
Maintenance Manager	-	-	-	-	-
Logistics Manager	-	-	-	-	-
Maintenance Staff	-	-	-	-	-
Logistics/Service Technicians	-	-	-	-	-
Field Supervisor	-	-	-	-	-
	1.00	1.00	1.00	1.00	1.00
TOTAL FULL-TIME EQUIVALENTS (FTE'S)	12.61	12.61	12.61	13.75	12.72
AVERAGE SALARY *(including premium pays, overtime, call-back, standby, etc.)*	$36,034	$37,674	$36,034	$37,704	$37,677
TOTAL SALARIES *(including premium pays, overtime, call-back, standby, etc.)*	$454,282	$474,954	$454,282	$518,460	$479,304
EMPLOYEE BENEFITS (@ 17% OF SALARIES)	$77,228	$80,742	$77,228	$88,138	$81,482
SALARIES AND EMPLOYEE BENEFITS	$531,510	$555,696	$531,510	$606,598	$560,786
NON-SALARY EXPENSES	$74,249	$137,428	$88,674	$171,036	$123,557
CAPITAL REPLACEMENT					
(Note: Purchased discounted @ 8% per annum).					
On-Board Equipment	$76,886	$76,886	$76,886	$106,223	$106,223
Vehicles and Maintenance	$52,846	$52,846	$52,846	$74,260	$74,260
Communications	$8,115	$8,115	$8,115	$10,532	$10,532
Office/Billing/Furniture	$6,711	$6,711	$6,711	$6,711	$6,711
	$144,558	$144,558	$144,558	$197,726	$197,726

Saskatchewan Emergency Medical Services (EMS) Development Project

Attachment K

Summary of Key Operating and Cost Statistics (All Calls)

	003 30 Oxbow	005 28 Estevan	040 30 Bengough	063 30 Carlyle	067 26 Weyburn
RETURN ON WORKING CAPITAL (@ 8%) **(Note: Based on 30 days' of working capital)**	$3,994	$4,570	$4,089	$5,127	$4,512
TOTAL OPERATING EXPENSES	$754,312	$842,252	$768,831	$980,488	$886,582
ONE-TIME CAPITAL COSTS	$513,080	$513,080	$513,080	$698,254	$698,254

Saskatchewan Emergency Medical Services (EMS) Development Project

Attachment K

Summary of Key Operating and Cost Statistics (All Calls)

	072 30	076 30	078 30	096 55	104 30
	Assiniboia	Ponteix	Shaunavon	Fillmore	Gravelbourg
KEY OPERATING STATISTICS					
Those that Directly Impact Cost Calculation					
Annual (emergent and non-emergent) calls	579.00	141.00	239.33	271.33	205.00
Unit-hrs. used	1,197.03	516.13	925.37	815.56	588.03
Unit-hrs. required	8,736.00	8,736.00	8,736.00	8,736.00	8,736.00
Field staff mix:					
E.M.R	-	50%	-	-	50%
E.M.T	100%	50%	100%	100%	50%
E.M.T.A	-	-	-	-	-
E.M.T.P	-	-	-	-	-
Ambulances (including inventory @ 30%)	2	2	2	2	2
No. of Stations	1	1	1	1	1
Estimated kilometres per unit-hr used	52.4	57.5	51.2	44.0	53.2
Estimated kilometres	62,703	29,657	47,411	35,889	31,274
Those that Do Not Directly Impact Cost Calculation					
Average Pct. Time on Task (also referred to as Unit-hour Utilization (UhU))	13.70%	5.91%	10.59%	9.34%	6.73%
Average Time-on-Task (hrs.)	2.07	3.66	3.87	3.01	2.87
Calls per Unit-Hour	0.0663	0.0161	0.0274	0.0311	0.0235
Average annual kilometres per ambulance	31,352	14,829	23,706	17,945	15,637
Total (Ambulances and Supervisory) Vehicles	3	3	3	3	3
STAFFING AND ANNUAL OPERATING EXPENSES					
FIELD STAFF					
Regular Full-Time Equivalents (FTE's)					
E.M.R	-	4.00	-	-	4.00
E.M.T	8.00	4.00	8.00	8.00	4.00
E.M.T.A	-	-	-	-	-
E.M.T.P	-	-	-	-	-
	8.00	8.00	8.00	8.00	8.00
Relief Full-Time Equivalents (FTE's)					
E.M.R	-	0.80	-	-	0.80
E.M.T	1.61	0.80	1.61	1.61	0.80
E.M.T.A	-	-	-	-	-
E.M.T.P	-	-	-	-	-
	1.61	1.61	1.61	1.61	1.61

Saskatchewan Emergency Medical Services (EMS) Development Project

Attachment K

Summary of Key Operating and Cost Statistics (All Calls)

	072 30	076 30	078 30	096 55	104 30
	Assiniboia	Ponteix	Shaunavon	Fillmore	Gravelbourg
Regular and Relief Full-Time Equivalents (FTE's)					
E.M.R	-	4.80	-	-	4.80
E.M.T	9.61	4.80	9.61	9.61	4.80
E.M.T.A	-	-	-	-	-
E.M.T.P	-	-	-	-	-
	9.61	9.61	9.61	9.61	9.61
ADMINISTRATIVE PERSONNEL (FTE'S)					
Director	-	-	-	-	-
Finance Director	-	-	-	-	-
Billing/Collection Manager	-	-	-	-	-
Billing & Collection Clerical	1.00	1.00	1.00	1.00	1.00
Admin Asst.	0.50	0.50	0.50	0.50	0.50
Admin Support	-	-	-	-	-
Community Support	-	-	-	-	-
Quality/Training Officer	0.50	0.50	0.50	0.50	0.50
MIS Coordinator	-	-	-	-	-
MIS Staff	-	-	-	-	-
	2.00	2.00	2.00	2.00	2.00
OPERATIONS PERSONNEL (FTE'S)					
Operations Manager	1.00	1.00	1.00	1.00	1.00
Maintenance Manager	-	-	-	-	-
Logistics Manager	-	-	-	-	-
Maintenance Staff	-	-	-	-	-
Logistics/Service Technicians	-	-	-	-	-
Field Supervisor	-	-	-	-	-
	1.00	1.00	1.00	1.00	1.00
TOTAL FULL-TIME EQUIVALENTS (FTE'S)	12.61	12.61	12.61	12.61	12.61
AVERAGE SALARY *(including premium pays, overtime, call-back, standby, etc.)*	$36,034	$31,546	$36,034	$36,034	$31,546
TOTAL SALARIES *(including premium pays, overtime, call-back, standby, etc.)*	$454,282	$397,698	$454,282	$454,282	$397,698
EMPLOYEE BENEFITS (@ 17% OF SALARIES)	$77,228	$67,609	$77,228	$77,228	$67,609
SALARIES AND EMPLOYEE BENEFITS	$531,510	$465,307	$531,510	$531,510	$465,307
NON-SALARY EXPENSES	$117,658	$65,828	$88,626	$77,362	$69,933
CAPITAL REPLACEMENT					
(Note: Purchased discounted @ 8% per annum).					
On-Board Equipment	$76,886	$76,886	$76,886	$76,886	$76,886
Vehicles and Maintenance	$52,846	$52,846	$52,846	$52,846	$52,846
Communications	$8,115	$8,115	$8,115	$8,115	$8,115
Office/Billing/Furniture	$6,711	$6,711	$6,711	$6,711	$6,711
	$144,558	$144,558	$144,558	$144,558	$144,558

Saskatchewan Emergency Medical Services (EMS) Development Project

Attachment K

Summary of Key Operating and Cost Statistics (All Calls)

	072 30	076 30	078 30	096 55	104 30
	Assiniboia	Ponteix	Shaunavon	Fillmore	Gravelbourg
RETURN ON WORKING CAPITAL (@ 8%) **(Note: Based on 30 days' of working capital)**	$4,280	$3,502	$4,089	$4,015	$3,529
TOTAL OPERATING EXPENSES	$798,007	$679,196	$768,783	$757,445	$683,328
ONE-TIME CAPITAL COSTS	$513,080	$513,080	$513,080	$513,080	$513,080

Saskatchewan Emergency Medical Services (EMS) Development Project

Attachment K

Summary of Key Operating and Cost Statistics (All Calls)

	111 30	121 31	124 30	137 25	153 30
	Maple Creek	Moosomin	Kipling	Swift Current	Whitewood
KEY OPERATING STATISTICS					
Those that Directly Impact Cost Calculation					
Annual (emergent and non-emergent) calls	354.67	366.67	190.00	1,349.00	115.00
Unit-hrs. used	1,154.93	950.99	585.63	3,012.14	288.34
Unit-hrs. required	8,736.00	8,736.00	8,736.00	12,844.00	8,736.00
Field staff mix:					
E.M.R	-	-	50%	-	50%
E.M.T	100%	100%	50%	50%	50%
E.M.T.A	-	-	-	50%	-
E.M.T.P	-	-	-	-	-
Ambulances (including inventory @ 30%)	2	2	2	3	2
No. of Stations	1	1	1	1	1
Estimated kilometres per unit-hr used	48.0	48.3	54.2	53.1	41.0
Estimated kilometres	55,430	45,899	31,754	159,946	11,833
Those that Do Not Directly Impact Cost Calculation					
Average Pct. Time on Task (also referred to as Unit-hour Utilization (UhU))	13.22%	10.89%	6.70%	23.45%	3.30%
Average Time-on-Task (hrs.)	3.26	2.59	3.08	2.23	2.51
Calls per Unit-Hour	0.0406	0.0420	0.0217	0.1050	0.0132
Average annual kilometres per ambulance	27,715	22,950	15,877	53,315	5,917
Total (Ambulances and Supervisory) Vehicles	3	3	3	4	3
STAFFING AND ANNUAL OPERATING EXPENSES					
FIELD STAFF					
Regular Full-Time Equivalents (FTE's)					
E.M.R	-	-	4.00	-	4.00
E.M.T	8.00	8.00	4.00	5.88	4.00
E.M.T.A	-	-	-	5.88	-
E.M.T.P	-	-	-	-	-
	8.00	8.00	8.00	11.76	8.00
Relief Full-Time Equivalents (FTE's)					
E.M.R	-	-	0.80	-	0.80
E.M.T	1.61	1.61	0.80	1.18	0.80
E.M.T.A	-	-	-	1.18	-
E.M.T.P	-	-	-	-	-
	1.61	1.61	1.61	2.36	1.61

Saskatchewan Emergency Medical Services (EMS) Development Project

Attachment K

Summary of Key Operating and Cost Statistics (All Calls)

	111 30	121 31	124 30	137 25	153 30
	Maple Creek	Moosomin	Kipling	Swift Current	Whitewood
Regular and Relief Full-Time Equivalents (FTE's)					
E.M.R	-	-	4.80	-	4.80
E.M.T	9.61	9.61	4.80	7.06	4.80
E.M.T.A	-	-	-	7.06	-
E.M.T.P	-	-	-	-	-
	9.61	9.61	9.61	14.12	9.61
ADMINISTRATIVE PERSONNEL (FTE'S)					
Director	-	-	-	1.00	-
Finance Director	-	-	-	-	-
Billing/Collection Manager	-	-	-	1.00	-
Billing & Collection Clerical	1.00	1.00	1.00	1.00	1.00
Admin Asst.	0.50	0.50	0.50	1.00	0.50
Admin Support	-	-	-	-	-
Community Support	-	-	-	-	-
Quality/Training Officer	0.50	0.50	0.50	1.00	0.50
MIS Coordinator	-	-	-	-	-
MIS Staff	-	-	-	-	-
	2.00	2.00	2.00	5.00	2.00
OPERATIONS PERSONNEL (FTE'S)					
Operations Manager	1.00	1.00	1.00	1.00	1.00
Maintenance Manager	-	-	-	-	-
Logistics Manager	-	-	-	-	-
Maintenance Staff	-	-	-	0.50	-
Logistics/Service Technicians	-	-	-	-	-
Field Supervisor	-	-	-	4.00	-
	1.00	1.00	1.00	5.50	1.00
TOTAL FULL-TIME EQUIVALENTS (FTE'S)	12.61	12.61	12.61	24.62	12.61
AVERAGE SALARY					
(including premium pays, overtime, call-back, standby, etc.)	$36,034	$36,034	$31,546	$39,993	$31,546
TOTAL SALARIES					
(including premium pays, overtime, call-back, standby, etc.)	$454,282	$454,282	$397,698	$984,804	$397,698
EMPLOYEE BENEFITS (@ 17% OF SALARIES)	$77,228	$77,228	$67,609	$167,417	$67,609
SALARIES AND EMPLOYEE BENEFITS	$531,510	$531,510	$465,307	$1,152,220	$465,307
NON-SALARY EXPENSES	$101,537	$91,686	$69,899	$251,055	$45,620
CAPITAL REPLACEMENT					
(Note: Purchased discounted @ 8% per annum).					
On-Board Equipment	$76,886	$76,886	$76,886	$106,223	$76,886
Vehicles and Maintenance	$52,846	$52,846	$52,846	$74,260	$52,846
Communications	$8,115	$8,115	$8,115	$10,532	$8,115
Office/Billing/Furniture	$6,711	$6,711	$6,711	$6,711	$6,711
	$144,558	$144,558	$144,558	$197,726	$144,558

Saskatchewan Emergency Medical Services (EMS) Development Project

Attachment K

Summary of Key Operating and Cost Statistics (All Calls)

	111 30	121 31	124 30	137 25	153 30
	Maple Creek	Moosomin	Kipling	Swift Current	Whitewood
RETURN ON WORKING CAPITAL (@ 8%) **(Note: Based on 30 days' of working capital)**	$4,174	$4,109	$3,529	$9,252	$3,369
TOTAL OPERATING EXPENSES	$781,779	$771,863	$683,293	$1,610,255	$658,855
ONE-TIME CAPITAL COSTS	$513,080	$513,080	$513,080	$698,254	$513,080

Saskatchewan Emergency Medical Services (EMS) Development Project

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Summary of Key Operating and Cost Statistics (All Calls)

	154 30	156 30	159 23	161 20	183 30
	Broadview	Indian Head	Regina	Moose Jaw	Esterhazy
KEY OPERATING STATISTICS					
Those that Directly Impact Cost Calculation					
Annual (emergent and non-emergent) calls	274.00	459.33	19,023.33	3,390.00	317.67
Unit-hrs. used	839.91	850.82	26,676.33	4,389.74	854.99
Unit-hrs. required	8,736.00	8,736.00	53,352.00	18,824.00	8,736.00
Field staff mix:					
E.M.R	-	-	-	-	-
E.M.T	100%	100%	50%	50%	100%
E.M.T.A	-	-	-	-	-
E.M.T.P	-	-	50%	50%	-
Ambulances (including inventory @ 30%)	2	2	12	4	2
No. of Stations	1	1	4	2	1
Estimated kilometres per unit-hr used	49.9	45.2	41.4	28.9	43.2
Estimated kilometres	41,921	38,471	1,104,581	127,055	36,946
Those that Do Not Directly Impact Cost Calculation					
Average Pct. Time on Task (also referred to as Unit-hour Utilization (UhU))	9.61%	9.74%	50.00%	23.32%	9.79%
Average Time-on-Task (hrs.)	3.07	1.85	1.40	1.29	2.69
Calls per Unit-Hour	0.0314	0.0526	0.3566	0.1801	0.0364
Average annual kilometres per ambulance	20,961	19,236	92,048	31,764	18,473
Total (Ambulances and Supervisory) Vehicles	3	3	14	5	3
STAFFING AND ANNUAL OPERATING EXPENSES					
FIELD STAFF					
Regular Full-Time Equivalents (FTE's)					
E.M.R	-	-	-	-	-
E.M.T	8.00	8.00	24.43	8.62	8.00
E.M.T.A	-	-	-	-	-
E.M.T.P	-	-	24.43	8.62	-
	8.00	8.00	48.86	17.24	8.00
Relief Full-Time Equivalents (FTE's)					
E.M.R	-	-	-	-	-
E.M.T	1.61	1.61	4.91	1.73	1.61
E.M.T.A	-	-	-	-	-
E.M.T.P	-	-	4.91	1.73	-
	1.61	1.61	9.81	3.46	1.61

Saskatchewan Emergency Medical Services (EMS) Development Project

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Summary of Key Operating and Cost Statistics (All Calls)

	154 30	156 30	159 23	161 20	183 30
	Broadview	Indian Head	Regina	Moose Jaw	Esterhazy
Regular and Relief Full-Time Equivalents (FTE's)					
E.M.R	-	-	-	-	-
E.M.T	9.61	9.61	29.34	10.35	9.61
E.M.T.A	-	-	-	-	-
E.M.T.P	-	-	29.34	10.35	-
	9.61	9.61	58.67	20.70	9.61
ADMINISTRATIVE PERSONNEL (FTE'S)					
Director	-	-	1.00	1.00	-
Finance Director	-	-	-	-	-
Billing/Collection Manager	-	-	1.00	1.00	-
Billing & Collection Clerical	1.00	1.00	1.00	1.00	1.00
Admin Asst.	0.50	0.50	1.00	1.00	0.50
Admin Support	-	-	-	-	-
Community Support	-	-	-	-	-
Quality/Training Officer	0.50	0.50	1.00	1.00	0.50
MIS Coordinator	-	-	-	-	-
MIS Staff	-	-	-	-	-
	2.00	2.00	5.00	5.00	2.00
OPERATIONS PERSONNEL (FTE'S)					
Operations Manager	1.00	1.00	1.00	1.00	1.00
Maintenance Manager	-	-	-	-	-
Logistics Manager	-	-	-	-	-
Maintenance Staff	-	-	0.50	0.50	-
Logistics/Service Technicians	-	-	-	-	-
Field Supervisor	-	-	4.00	4.00	-
	1.00	1.00	5.50	5.50	1.00
TOTAL FULL-TIME EQUIVALENTS (FTE'S)	12.61	12.61	69.17	31.20	12.61
AVERAGE SALARY *(including premium pays, overtime, call-back, standby, etc.)*	$36,034	$36,034	$40,886	$41,263	$36,034
TOTAL SALARIES *(including premium pays, overtime, call-back, standby, etc.)*	$454,282	$454,282	$2,828,113	$1,287,443	$454,282
EMPLOYEE BENEFITS (@ 17% OF SALARIES)	$77,228	$77,228	$480,779	$218,865	$77,228
SALARIES AND EMPLOYEE BENEFITS	$531,510	$531,510	$3,308,892	$1,506,309	$531,510
NON-SALARY EXPENSES	$83,975	$87,078	$1,922,560	$290,744	$80,211
CAPITAL REPLACEMENT (Note: **Purchased discounted @ 8% per annum**).					
On-Board Equipment	$76,886	$76,886	$401,857	$133,952	$76,886
Vehicles and Maintenance	$52,846	$52,846	$277,005	$95,674	$52,846
Communications	$8,115	$8,115	$32,985	$12,573	$8,115
Office/Billing/Furniture	$6,711	$6,711	$14,225	$9,216	$6,711
	$144,558	$144,558	$726,072	$251,415	$144,558

Saskatchewan Emergency Medical Services (EMS) Development Project

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Summary of Key Operating and Cost Statistics (All Calls)

	154 30	156 30	159 23	161 20	183 30
	Broadview	Indian Head	Regina	Moose Jaw	Estevan
RETURN ON WORKING CAPITAL (@ 8%) **(Note: Based on 30 days' of working capital)**	$4,058	$4,079	$34,493	$11,849	$4,033
TOTAL OPERATING EXPENSES	$764,101	$767,225	$5,992,017	$2,060,317	$760,312
ONE-TIME CAPITAL COSTS	$513,080	$513,080	$2,547,753	$887,251	$513,080

Saskatchewan Emergency Medical Services (EMS) Development Project

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Summary of Key Operating and Cost Statistics (All Calls)

	187 30	194 30	214 21	218 30	220 30
	Fort Qu'Appelle	Central Butte	Melville	Cupar	Strasbourg
KEY OPERATING STATISTICS					
Those that Directly Impact Cost Calculation					
Annual (emergent and non-emergent) calls	574.33	181.67	390.67	138.00	218.67
Unit-hrs. used	844.37	565.63	728.51	337.36	672.62
Unit-hrs. required	8,736.00	8,736.00	8,736.00	8,736.00	8,736.00
Field staff mix:					
E.M.R	-	50%	-	50%	50%
E.M.T	100%	50%	100%	50%	50%
E.M.T.A	-	-	-	-	-
E.M.T.P	-	-	-	-	-
Ambulances (including inventory @ 30%)	2	2	2	2	2
No. of Stations	1	1	1	1	1
Estimated kilometres per unit-hr used	33.3	46.9	48.0	58.4	64.4
Estimated kilometres	28,131	26,528	34,965	19,708	43,305
Those that Do Not Directly Impact Cost Calculation					
Average Pct. Time on Task (also referred to as Unit-hour Utilization (UhU))	9.67%	6.47%	8.34%	3.86%	7.70%
Average Time-on-Task (hrs.)	1.47	3.11	1.86	2.44	3.08
Calls per Unit-Hour	0.0657	0.0208	0.0447	0.0158	0.0250
Average annual kilometres per ambulance	14,066	13,264	17,483	9,854	21,653
Total (Ambulances and Supervisory) Vehicles	3	3	3	3	3
STAFFING AND ANNUAL OPERATING EXPENSES					
FIELD STAFF					
Regular Full-Time Equivalents (FTE's)					
E.M.R	-	4.00	-	4.00	4.00
E.M.T	8.00	4.00	8.00	4.00	4.00
E.M.T.A	-	-	-	-	-
E.M.T.P	-	-	-	-	-
	8.00	8.00	8.00	8.00	8.00
Relief Full-Time Equivalents (FTE's)					
E.M.R	-	0.80	-	0.80	0.80
E.M.T	1.61	0.80	1.61	0.80	0.80
E.M.T.A	-	-	-	-	-
E.M.T.P	-	-	-	-	-
	1.61	1.61	1.61	1.61	1.61

Saskatchewan Emergency Medical Services (EMS) Development Project

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Summary of Key Operating and Cost Statistics (All Calls)

	187 30	194 30	214 21	218 30	220 30
	Fort Qu'Appelle	Central Butte	Melville	Cupar	Strasbourg
Regular and Relief Full-Time Equivalents (FTE's)					
E.M.R	-	4.80	-	4.80	4.80
E.M.T	9.61	4.80	9.61	4.80	4.80
E.M.T.A	-	-	-	-	-
E.M.T.P	-	-	-	-	-
	9.61	9.61	9.61	9.61	9.61
ADMINISTRATIVE PERSONNEL (FTE'S)					
Director	-	-	-	-	-
Finance Director	-	-	-	-	-
Billing/Collection Manager	-	-	-	-	-
Billing & Collection Clerical	1.00	1.00	1.00	1.00	1.00
Admin Asst.	0.50	0.50	0.50	0.50	0.50
Admin Support	-	-	-	-	-
Community Support	-	-	-	-	-
Quality/Training Officer	0.50	0.50	0.50	0.50	0.50
MIS Coordinator	-	-	-	-	-
MIS Staff	-	-	-	-	-
	2.00	2.00	2.00	2.00	2.00
OPERATIONS PERSONNEL (FTE'S)					
Operations Manager	1.00	1.00	1.00	1.00	1.00
Maintenance Manager	-	-	-	-	-
Logistics Manager	-	-	-	-	-
Maintenance Staff	-	-	-	-	-
Logistics/Service Technicians	-	-	-	-	-
Field Supervisor	-	-	-	-	-
	1.00	1.00	1.00	1.00	1.00
TOTAL FULL-TIME EQUIVALENTS (FTE'S)	12.61	12.61	12.61	12.61	12.61
AVERAGE SALARY					
(including premium pays, overtime, call-back, standby, etc.)	$36,034	$31,546	$36,034	$31,546	$31,546
TOTAL SALARIES					
(including premium pays, overtime, call-back, standby, etc.)	$454,282	$397,698	$454,282	$397,698	$397,698
EMPLOYEE BENEFITS (@ 17% OF SALARIES)	$77,228	$67,609	$77,228	$67,609	$67,609
SALARIES AND EMPLOYEE BENEFITS	$531,510	$465,307	$531,510	$465,307	$465,307
NON-SALARY EXPENSES	$80,149	$63,948	$80,761	$54,973	$83,430
CAPITAL REPLACEMENT					
(Note: Purchased discounted @ 8% per annum).					
On-Board Equipment	$76,886	$76,886	$76,886	$76,886	$76,886
Vehicles and Maintenance	$52,846	$52,846	$52,846	$52,846	$52,846
Communications	$8,115	$8,115	$8,115	$8,115	$8,115
Office/Billing/Furniture	$6,711	$6,711	$6,711	$6,711	$6,711
	$144,558	$144,558	$144,558	$144,558	$144,558

Saskatchewan Emergency Medical Services (EMS) Development Project

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Summary of Key Operating and Cost Statistics (All Calls)

	187 30	194 30	214 21	218 30	220 30
	Fort Qu'Appelle	Canora Base	Melville	Cupar	Strasbourg
RETURN ON WORKING CAPITAL (@ 8%) **(Note: Based on 30 days' of working capital)**	$4,033	$3,490	$4,037	$3,430	$3,618
TOTAL OPERATING EXPENSES	$760,250	$677,303	$760,867	$668,269	$696,914
ONE-TIME CAPITAL COSTS	$513,080	$513,080	$513,080	$513,080	$513,080

Saskatchewan Emergency Medical Services (EMS) Development Project

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Summary of Key Operating and Cost Statistics (All Calls)

	231 30	244 27	247 52	252 30	259 30
	Lember	Yorkton	Leross	Davidson	Eston
KEY OPERATING STATISTICS					
Those that Directly Impact Cost Calculation					
Annual (emergent and non-emergent) calls	164.00	2,314.67	350.00	189.67	190.00
Unit-hrs. used	678.68	5,477.34	834.79	548.95	536.06
Unit-hrs. required	8,736.00	17,524.00	8,736.00	8,736.00	8,736.00
Field staff mix:					
E.M.R	50%	-	-	50%	50%
E.M.T	50%	50%	100%	50%	50%
E.M.T.A	-	50%	-	-	-
E.M.T.P	-	-	-	-	-
Ambulances (including inventory @ 30%)	2	4	2	2	2
No. of Stations	1	1	1	1	1
Estimated kilometres per unit-hr used	61.1	38.2	50.2	53.0	53.1
Estimated kilometres	41,489	209,311	41,878	29,096	28,488
Those that Do Not Directly Impact Cost Calculation					
Average Pct. Time on Task (also referred to as Unit-hour Utilization (Uhu))	7.77%	31.26%	9.56%	6.28%	6.14%
Average Time-on-Task (hrs.)	4.14	2.37	2.39	2.89	2.82
Calls per Unit-Hour	0.0188	0.1321	0.0401	0.0217	0.0217
Average annual kilometres per ambulance	20,745	52,328	20,939	14,548	14,244
Total (Ambulances and Supervisory) Vehicles	3	5	3	3	3
STAFFING AND ANNUAL OPERATING EXPENSES					
FIELD STAFF					
Regular Full-Time Equivalents (FTE's)					
E.M.R	4.00	-	-	4.00	4.00
E.M.T	4.00	8.02	8.00	4.00	4.00
E.M.T.A	-	8.02	-	-	-
E.M.T.P	-	-	-	-	-
	8.00	16.05	8.00	8.00	8.00
Relief Full-Time Equivalents (FTE's)					
E.M.R	0.80	-	-	0.80	0.80
E.M.T	0.80	1.61	1.61	0.80	0.80
E.M.T.A	-	1.61	-	-	-
E.M.T.P	-	-	-	-	-
	1.61	3.22	1.61	1.61	1.61

Saskatchewan Emergency Medical Services (EMS) Development Project

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Summary of Key Operating and Cost Statistics (All Calls)

	231 30	244 27	247 52	252 30	259 30
	Lashe	Yorkton	Lanvac	Davidson	Bassa
Regular and Relief Full-Time Equivalents (FTE's)					
E.M.R	4.80	-	-	4.80	4.80
E.M.T	4.80	9.64	9.61	4.80	4.80
E.M.T.A	-	9.64	-	-	-
E.M.T.P	-	-	-	-	-
	9.61	19.27	9.61	9.61	9.61
ADMINISTRATIVE PERSONNEL (FTE'S)					
Director	-	1.00	-	-	-
Finance Director	-	-	-	-	-
Billing/Collection Manager	-	1.00	-	-	-
Billing & Collection Clerical	1.00	1.00	1.00	1.00	1.00
Admin Asst.	0.50	1.00	0.50	0.50	0.50
Admin Support	-	-	-	-	-
Community Support	-	-	-	-	-
Quality Training Officer	0.50	1.00	0.50	0.50	0.50
MIS Coordinator	-	-	-	-	-
MIS Staff	-	-	-	-	-
	2.00	5.00	2.00	2.00	2.00
OPERATIONS PERSONNEL (FTE'S)					
Operations Manager	1.00	1.00	1.00	1.00	1.00
Maintenance Manager	-	-	-	-	-
Logistics Manager	-	-	-	-	-
Maintenance Staff	-	0.50	-	-	-
Logistics Service Technicians	-	-	-	-	-
Field Supervisor	-	4.00	-	-	-
	1.00	5.50	1.00	1.00	1.00
TOTAL FULL-TIME EQUIVALENTS (FTE'S)	12.61	29.77	12.61	12.61	12.61
AVERAGE SALARY *(including premium pays, overtime, call-back, standby, etc.)*	$31,546	$39,655	$36,034	$31,546	$31,546
TOTAL SALARIES *(including premium pays, overtime, call-back, standby, etc.)*	$397,698	$1,180,583	$454,282	$397,698	$397,698
EMPLOYEE BENEFITS (@ 17% OF SALARIES)	$67,609	$200,699	$77,228	$67,609	$67,609
SALARIES AND EMPLOYEE BENEFITS	$465,307	$1,381,282	$531,510	$465,307	$465,307
NON-SALARY EXPENSES	$79,455	$339,954	$86,729	$67,016	$66,372
CAPITAL REPLACEMENT					
(Note: Purchased discounted @ 8% per annum).					
On-Board Equipment	$76,886	$133,952	$76,886	$76,886	$76,886
Vehicles and Maintenance	$52,846	$95,674	$52,846	$52,846	$52,846
Communications	$8,115	$12,573	$8,115	$8,115	$8,115
Office Billing Furniture	$6,711	$6,711	$6,711	$6,711	$6,711
	$144,558	$248,911	$144,558	$144,558	$144,558

Saskatchewan Emergency Medical Services (EMS) Development Project

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Summary of Key Operating and Cost Statistics (All Calls)

	231 30	244 27	247 52	252 30	259 30
	Leader	Yorkton	Lanigan	Davidson	Eston
RETURN ON WORKING CAPITAL (@ 8%) **(Note: Based on 30 days' of working capital)**	$3,592	$11,349	$4,076	$3,510	$3,506
TOTAL OPERATING EXPENSES	$692,912	$1,981,496	$766,873	$680,391	$679,743
ONE-TIME CAPITAL COSTS	$513,080	$877,251	$513,080	$513,080	$513,080

Saskatchewan Emergency Medical Services (EMS) Development Project

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Summary of Key Operating and Cost Statistics (All Calls)

	271 30	274 30	278 51	284 30	287 30
	Kamsack	Canora	Pennichy	Outlook	Rosetown
KEY OPERATING STATISTICS					
Those that Directly Impact Cost Calculation					
Annual (emergent and non-emergent) calls	518.00	470.33	366.33	227.00	299.33
Unit-hrs. used	1,077.19	907.35	872.24	578.96	872.02
Unit-hrs. required	8,736.00	8,736.00	8,736.00	8,736.00	8,736.00
Field staff mix:					
E.M.R	-	-	-	50%	-
E.M.T	100%	100%	100%	50%	100%
E.M.T.A	-	-	-	-	-
E.M.T.P	-	-	-	-	-
Ambulances (including inventory @ 30%)	2	2	2	2	2
No. of Stations	1	1	1	1	1
Estimated kilometres per unit-hr used	44.6	38.4	62.8	43.1	41.0
Estimated kilometres	48,075	34,852	54,740	24,941	35,733
Those that Do Not Directly Impact Cost Calculation					
Average Pct. Time on Task (also referred to as Unit-hour Utilization (UhU))	12.33%	10.39%	9.98%	6.63%	9.98%
Average Time-on-Task (hrs.)	2.08	1.93	2.38	2.55	2.91
Calls per Unit-Hour	0.0593	0.0538	0.0419	0.0260	0.0343
Average annual kilometres per ambulance	24,038	17,426	27,370	12,471	17,867
Total (Ambulances and Supervisory) Vehicles	3	3	3	3	3
STAFFING AND ANNUAL OPERATING EXPENSES					
FIELD STAFF					
Regular Full-Time Equivalents (FTE's)					
E.M.R	-	-	-	4.00	-
E.M.T	8.00	8.00	8.00	4.00	8.00
E.M.T.A	-	-	-	-	-
E.M.T.P	-	-	-	-	-
	8.00	8.00	8.00	8.00	8.00
Relief Full-Time Equivalents (FTE's)					
E.M.R	-	-	-	0.80	-
E.M.T	1.61	1.61	1.61	0.80	1.61
E.M.T.A	-	-	-	-	-
E.M.T.P	-	-	-	-	-
	1.61	1.61	1.61	1.61	1.61

Saskatchewan Emergency Medical Services (EMS) Development Project

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Summary of Key Operating and Cost Statistics (All Calls)

	271 30	274 30	278 51	284 30	287 30
	Kamsack	Canora	Pennichy	Outlook	Rosetown
Regular and Relief Full-Time Equivalents (FTE's)					
E.M.R	-	-	-	4.80	-
E.M.T	9.61	9.61	9.61	4.80	9.61
E.M.T.A	-	-	-	-	-
E.M.T.P	-	-	-	-	-
	9.61	9.61	9.61	9.61	9.61
ADMINISTRATIVE PERSONNEL (FTE'S)					
Director	-	-	-	-	-
Finance Director	-	-	-	-	-
Billing/Collection Manager	-	-	-	-	-
Billing & Collection Clerical	1.00	1.00	1.00	1.00	1.00
Admin Asst.	0.50	0.50	0.50	0.50	0.50
Admin Support	-	-	-	-	-
Community Support	-	-	-	-	-
Quality Training Officer	0.50	0.50	0.50	0.50	0.50
MIS Coordinator	-	-	-	-	-
MIS Staff	-	-	-	-	-
	2.00	2.00	2.00	2.00	2.00
OPERATIONS PERSONNEL (FTE'S)					
Operations Manager	1.00	1.00	1.00	1.00	1.00
Maintenance Manager	-	-	-	-	-
Logistics Manager	-	-	-	-	-
Maintenance Staff	-	-	-	-	-
Logistics Service Technicians	-	-	-	-	-
Field Supervisor	-	-	-	-	-
	1.00	1.00	1.00	1.00	1.00
TOTAL FULL-TIME EQUIVALENTS (FTE'S)	12.61	12.61	12.61	12.61	12.61
AVERAGE SALARY					
(including premium pays, overtime, call-back, standby, etc.)	$36,034	$36,034	$36,034	$31,546	$36,034
TOTAL SALARIES					
(including premium pays, overtime, call-back, standby, etc.)	$454,282	$454,282	$454,282	$397,698	$454,282
EMPLOYEE BENEFITS (@ 17% OF SALARIES)	$77,228	$77,228	$77,228	$67,609	$77,228
SALARIES AND EMPLOYEE BENEFITS	$531,510	$531,510	$531,510	$465,307	$531,510
NON-SALARY EXPENSES	$99,612	$83,575	$101,222	$63,904	$78,225
CAPITAL REPLACEMENT					
(Note: Purchased discounted @ 8% per annum).					
On-Board Equipment	$76,886	$76,886	$76,886	$76,886	$76,886
Vehicles and Maintenance	$52,846	$52,846	$52,846	$52,846	$52,846
Communications	$8,115	$8,115	$8,115	$8,115	$8,115
Office Billing Furniture	$6,711	$6,711	$6,711	$6,711	$6,711
	$144,558	$144,558	$144,558	$144,558	$144,558

Saskatchewan Emergency Medical Services (EMS) Development Project

Attachment K

Summary of Key Operating and Cost Statistics (All Calls)

	271 30	274 30	278 51	284 30	287 30
	Kamsack	Canora	Pumichy	Outlook	Rosetown
RETURN ON WORKING CAPITAL (@ 8%) **(Note: Based on 30 days' of working capital)**	$4,161	$4,056	$4,172	$3,489	$4,020
TOTAL OPERATING EXPENSES	$779,842	$763,699	$781,462	$677,259	$758,314
ONE-TIME CAPITAL COSTS	$513,080	$513,080	$513,080	$513,080	$513,080

Saskatchewan Emergency Medical Services (EMS) Development Project

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Summary of Key Operating and Cost Statistics (All Calls)

	290 30	307 50	312 30	334 30	338 30
	Kindersley	Elfros	Watrous	Preeceville	Watson
KEY OPERATING STATISTICS					
Those that Directly Impact Cost Calculation					
Annual (emergent and non-emergent) calls	285.33	618.67	209.00	340.33	237.67
Unit-hrs. used	908.69	2,012.81	564.11	1,197.09	692.86
Unit-hrs. required	8,736.00	9,516.00	8,736.00	8,736.00	8,736.00
Field staff mix:					
E.M.R	-	-	50%	-	50%
E.M.T	100%	50%	50%	100%	50%
E.M.T.A	-	50%	-	-	-
E.M.T.P	-	-	-	-	-
Ambulances (including inventory @ 30%)	2	3	2	2	2
No. of Stations	1	1	1	1	1
Estimated kilometres per unit-hr used	54.7	59.4	45.2	46.5	46.6
Estimated kilometres	49,701	119,545	25,521	55,644	32,275
Those that Do Not Directly Impact Cost Calculation					
Average Pct. Time on Task (also referred to as Unit-hour Utilization (UhU))	10.40%	21.15%	6.46%	13.70%	7.93%
Average Time-on-Task (hrs.)	3.18	3.25	2.70	3.52	2.92
Calls per Unit-Hour	0.0327	0.0650	0.0239	0.0390	0.0272
Average annual kilometres per ambulance	24,851	39,848	12,761	27,822	16,138
Total (Ambulances and Supervisory) Vehicles	3	4	3	3	3
STAFFING AND ANNUAL OPERATING EXPENSES					
FIELD STAFF					
Regular Full-Time Equivalents (FTE's)					
E.M.R	-	-	4.00	-	4.00
E.M.T	8.00	4.36	4.00	8.00	4.00
E.M.T.A	-	4.36	-	-	-
E.M.T.P	-	-	-	-	-
	8.00	8.71	8.00	8.00	8.00
Relief Full-Time Equivalents (FTE's)					
E.M.R	-	-	0.80	-	0.80
E.M.T	1.61	0.88	0.80	1.61	0.80
E.M.T.A	-	0.88	-	-	-
E.M.T.P	-	-	-	-	-
	1.61	1.75	1.61	1.61	1.61

Saskatchewan Emergency Medical Services (EMS) Development Project

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Summary of Key Operating and Cost Statistics (All Calls)

	290 30	307 50	312 30	334 30	338 30
	Kindersley	Elfros	Watrous	Preeceville	Wynyard
Regular and Relief Full-Time Equivalents (FTE's)					
E.M.R	-	-	4.80	-	4.80
E.M.T	9.61	5.23	4.80	9.61	4.80
E.M.T.A	-	5.23	-	-	-
E.M.T.P	-	-	-	-	-
	9.61	10.46	9.61	9.61	9.61
ADMINISTRATIVE PERSONNEL (FTE'S)					
Director	-	-	-	-	-
Finance Director	-	-	-	-	-
Billing/Collection Manager	-	-	-	-	-
Billing & Collection Clerical	1.00	1.00	1.00	1.00	1.00
Admin Asst.	0.50	0.50	0.50	0.50	0.50
Admin Support	-	-	-	-	-
Community Support	-	-	-	-	-
Quality/Training Officer	0.50	0.50	0.50	0.50	0.50
MIS Coordinator	-	-	-	-	-
MIS Staff	-	-	-	-	-
	2.00	2.00	2.00	2.00	2.00
OPERATIONS PERSONNEL (FTE'S)					
Operations Manager	1.00	1.00	1.00	1.00	1.00
Maintenance Manager	-	-	-	-	-
Logistics Manager	-	-	-	-	-
Maintenance Staff	-	-	-	-	-
Logistics/Service Technicians	-	-	-	-	-
Field Supervisor	-	-	-	-	-
	1.00	1.00	1.00	1.00	1.00
TOTAL FULL-TIME EQUIVALENTS (FTE'S)	12.61	13.46	12.61	12.61	12.61
AVERAGE SALARY *(including premium pays, overtime, call-back, standby, etc.)*	$36,034	$37,697	$31,546	$36,034	$31,546
TOTAL SALARIES *(including premium pays, overtime, call-back, standby, etc.)*	$454,282	$507,583	$397,698	$454,282	$397,698
EMPLOYEE BENEFITS (@ 17% OF SALARIES)	$77,228	$86,289	$67,609	$77,228	$67,609
SALARIES AND EMPLOYEE BENEFITS	$531,510	$593,873	$465,307	$531,510	$465,307
NON-SALARY EXPENSES	$92,795	$180,509	$63,867	$101,240	$72,218
CAPITAL REPLACEMENT					
(Note: Purchased discounted @ 8% per annum).					
On-Board Equipment	$76,886	$106,223	$76,886	$76,886	$76,886
Vehicles and Maintenance	$52,846	$74,260	$52,846	$52,846	$52,846
Communications	$8,115	$10,532	$8,115	$8,115	$8,115
Office Billing Furniture	$6,711	$6,711	$6,711	$6,711	$6,711
	$144,558	$197,726	$144,558	$144,558	$144,558

Saskatchewan Emergency Medical Services (EMS) Development Project

Attachment K

Summary of Key Operating and Cost Statistics (All Calls)

	290 30	307 50	312 30	334 30	338 30
	Kindersley	Elfros	Watrous	Preeceville	Watson
RETURN ON WORKING CAPITAL (@ 8%) **(Note: Based on 30 days' of working capital)**	$4,116	$5,106	$3,489	$4,172	$3,544
TOTAL OPERATING EXPENSES	$772,979	$977,214	$677,222	$781,480	$685,628
ONE-TIME CAPITAL COSTS	$513,080	$698,254	$513,080	$513,080	$513,080

Saskatchewan Emergency Medical Services (EMS) Development Project

Attachment K

Summary of Key Operating and Cost Statistics (All Calls)

	344 24	347 30	351 30	366 30	370 30
	Saskatoon	Biggar	Kerrobert	Kelvington	Humboldt
KEY OPERATING STATISTICS					
Those that Directly Impact Cost Calculation					
Annual (emergent and non-emergent) calls	18,461.00	253.33	195.33	381.33	535.00
Unit-hrs. used	30,408.71	539.60	715.86	1,112.85	883.39
Unit-hrs. required	58,032.00	8,736.00	8,736.00	8,736.00	8,736.00
Field staff mix:					
E.M.R	-	50%	50%	-	-
E.M.T	50%	50%	50%	100%	100%
E.M.T.A	-	-	-	-	-
E.M.T.P	50%	-	-	-	-
Ambulances (including inventory @ 30%)	15	2	2	2	2
No. of Stations	4	1	1	1	1
Estimated kilometres per unit-hr used	43.8	49.1	49.0	55.2	45.1
Estimated kilometres	1,332,326	26,471	35,044	61,388	39,872
Those that Do Not Directly Impact Cost Calculation					
Average Pct. Time on Task (also referred to as Unit-hour Utilization ('hU'))	52.40%	6.18%	8.19%	12.74%	10.11%
Average Time-on-Task (hrs.)	1.65	2.13	3.66	2.92	1.65
Calls per Unit-Hour	0.3181	0.0290	0.0224	0.0437	0.0612
Average annual kilometres per ambulance	88,822	13,236	17,522	30,694	19,936
Total (Ambulances and Supervisory) Vehicles	17	3	3	3	3
STAFFING AND ANNUAL OPERATING EXPENSES					
FIELD STAFF					
Regular Full-Time Equivalents (FTE's)					
E.M.R	-	4.00	4.00	-	-
E.M.T	26.57	4.00	4.00	8.00	8.00
E.M.T.A	-	-	-	-	-
E.M.T.P	26.57	-	-	-	-
	53.14	8.00	8.00	8.00	8.00
Relief Full-Time Equivalents (FTE's)					
E.M.R	-	0.80	0.80	-	-
E.M.T	5.34	0.80	0.80	1.61	1.61
E.M.T.A	-	-	-	-	-
E.M.T.P	5.34	-	-	-	-
	10.67	1.61	1.61	1.61	1.61

Saskatchewan Emergency Medical Services (EMS) Development Project

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Summary of Key Operating and Cost Statistics (All Calls)

	344 24	347 30	351 30	366 30	370 30
	Saskatoon	Biggar	Kerrobert	Kelvington	Humboldt
Regular and Relief Full-Time Equivalents (FTE's)					
E.M.R	-	4.80	4.80	-	-
E.M.T	31.91	4.80	4.80	9.61	9.61
E.M.T.A	-	-	-	-	-
E.M.T.P	31.91	-	-	-	-
	63.82	9.61	9.61	9.61	9.61
ADMINISTRATIVE PERSONNEL (FTE'S)					
Director	1.00	-	-	-	-
Finance Director	-	-	-	-	-
Billing/Collection Manager	1.00	-	-	-	-
Billing & Collection Clerical	1.00	1.00	1.00	1.00	1.00
Admin Asst.	1.00	0.50	0.50	0.50	0.50
Admin Support	-	-	-	-	-
Community Support	-	-	-	-	-
Quality/Training Officer	1.00	0.50	0.50	0.50	0.50
MIS Coordinator	-	-	-	-	-
MIS Staff	-	-	-	-	-
	5.00	2.00	2.00	2.00	2.00
OPERATIONS PERSONNEL (FTE'S)					
Operations Manager	1.00	1.00	1.00	1.00	1.00
Maintenance Manager	-	-	-	-	-
Logistics Manager	-	-	-	-	-
Maintenance Staff	0.50	-	-	-	-
Logistics Service Technicians	-	-	-	-	-
Field Supervisor	4.00	-	-	-	-
	5.50	1.00	1.00	1.00	1.00
TOTAL FULL-TIME EQUIVALENTS (FTE'S)	74.32	12.61	12.61	12.61	12.61
AVERAGE SALARY					
(including premium pays, overtime, call-back, standby, etc.)	$40,864	$31,546	$31,546	$36,034	$36,034
TOTAL SALARIES					
(including premium pays, overtime, call-back, standby, etc.)	$3,036,938	$397,698	$397,698	$454,282	$454,282
EMPLOYEE BENEFITS (@ 17% OF SALARIES)	$516,280	$67,609	$67,609	$77,228	$77,228
SALARIES AND EMPLOYEE BENEFITS	$3,553,218	$465,307	$465,307	$531,510	$531,510
NON-SALARY EXPENSES	$2,147,803	$66,527	$73,649	$108,954	$91,380
CAPITAL REPLACEMENT					
(Note: Purchased discounted @ 8% per annum).					
On-Board Equipment	$508,080	$76,886	$76,886	$76,886	$76,886
Vehicles and Maintenance	$341,247	$52,846	$52,846	$52,846	$52,846
Communications	$41,150	$8,115	$8,115	$8,115	$8,115
Office Billing Furniture	$14,225	$6,711	$6,711	$6,711	$6,711
	$904,702	$144,558	$144,558	$144,558	$144,558

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Summary of Key Operating and Cost Statistics (All Calls)

	344 24	347 30	351 30	366 30	370 30
	Saskatoon	Biggar	Kerrobert	Kelvington	Humboldt
RETURN ON WORKING CAPITAL (@ 8%) **(Note: Based on 30 days' of working capital)**	$37,589	$3,507	$3,554	$4,223	$4,107
TOTAL OPERATING EXPENSES	$6,643,312	$679,899	$687,068	$789,245	$771,555
ONE-TIME CAPITAL COSTS	$3,169,007	$513,080	$513,080	$513,080	$513,080

Saskatchewan Emergency Medical Services (EMS) Development Project

Attachment K

Summary of Key Operating and Cost Statistics (All Calls)

	394 30	395 30	401 30	403 30	410 30
	Hudson Bay	Porcupine Plain	Wakaw	Rosthern	Unity
KEY OPERATING STATISTICS					
Those that Directly Impact Cost Calculation					
Annual (emergent and non-emergent) calls	121.00	113.33	198.67	312.67	354.67
Unit-hrs. used	416.74	357.90	435.89	467.07	1,458.26
Unit-hrs. required	8,736.00	8,736.00	8,736.00	8,736.00	8,736.00
Field staff mix:					
E.M.R	50%	50%	50%	50%	-
E.M.T	50%	50%	50%	50%	50%
E.M.T.A	-	-	-	-	50%
E.M.T.P	-	-	-	-	-
Ambulances (including inventory @ 30%)	2	2	2	2	2
No. of Stations	1	1	1	1	1
Estimated kilometres per unit-hr used	35.1	50.8	43.5	43.0	43.2
Estimated kilometres	14,607	18,165	18,956	20,083	63,036
Those that Do Not Directly Impact Cost Calculation					
Average Pct. Time on Task (also referred to as Unit-hour Utilization (UhU))	4.77%	4.10%	4.99%	5.35%	16.69%
Average Time-on-Task (hrs.)	3.44	3.16	2.19	1.49	4.11
Calls per Unit-Hour	0.0139	0.0130	0.0227	0.0358	0.0406
Average annual kilometres per ambulance	7,304	9,083	9,478	10,042	31,518
Total (Ambulances and Supervisory) Vehicles	3	3	3	3	3
STAFFING AND ANNUAL OPERATING EXPENSES					
FIELD STAFF					
Regular Full-Time Equivalents (FTE's)					
E.M.R	4.00	4.00	4.00	4.00	-
E.M.T	4.00	4.00	4.00	4.00	4.00
E.M.T.A	-	-	-	-	4.00
E.M.T.P	-	-	-	-	-
	8.00	8.00	8.00	8.00	8.00
Relief Full-Time Equivalents (FTE's)					
E.M.R	0.80	0.80	0.80	0.80	-
E.M.T	0.80	0.80	0.80	0.80	0.80
E.M.T.A	-	-	-	-	0.80
E.M.T.P	-	-	-	-	-
	1.61	1.61	1.61	1.61	1.61

Saskatchewan Emergency Medical Services (EMS) Development Project

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Summary of Key Operating and Cost Statistics (All Calls)

	394 30	395 30	401 30	403 30	410 30
	Hudson Bay	Porcupine Plain	Wakaw	Rosthern	Unity
Regular and Relief Full-Time Equivalents (FTE's)					
E.M.R	4.80	4.80	4.80	4.80	-
E.M.T	4.80	4.80	4.80	4.80	4.80
E.M.T.A	-	-	-	-	4.80
E.M.T.P	-	-	-	-	-
	9.61	9.61	9.61	9.61	9.61
ADMINISTRATIVE PERSONNEL (FTE'S)					
Director	-	-	-	-	-
Finance Director	-	-	-	-	-
Billing/Collection Manager	-	-	-	-	-
Billing & Collection Clerical	1.00	1.00	1.00	1.00	1.00
Admin Asst.	0.50	0.50	0.50	0.50	0.50
Admin Support	-	-	-	-	-
Community Support	-	-	-	-	-
Quality/Training Officer	0.50	0.50	0.50	0.50	0.50
MIS Coordinator	-	-	-	-	-
MIS Staff	-	-	-	-	-
	2.00	2.00	2.00	2.00	2.00
OPERATIONS PERSONNEL (FTE'S)					
Operations Manager	1.00	1.00	1.00	1.00	1.00
Maintenance Manager	-	-	-	-	-
Logistics Manager	-	-	-	-	-
Maintenance Staff	-	-	-	-	-
Logistics Service Technicians	-	-	-	-	-
Field Supervisor	-	-	-	-	-
	1.00	1.00	1.00	1.00	1.00
TOTAL FULL-TIME EQUIVALENTS (FTE'S)	12.61	12.61	12.61	12.61	12.61
AVERAGE SALARY *(including premium pays, overtime, call-back, standby, etc.)*	$31,546	$31,546	$31,546	$31,546	$37,674
TOTAL SALARIES *(including premium pays, overtime, call-back, standby, etc.)*	$397,698	$397,698	$397,698	$397,698	$474,954
EMPLOYEE BENEFITS (@ 17% OF SALARIES)	$67,609	$67,609	$67,609	$67,609	$80,742
SALARIES AND EMPLOYEE BENEFITS	$465,307	$465,307	$465,307	$465,307	$555,696
NON-SALARY EXPENSES	$48,837	$52,398	$56,396	$61,814	$109,751
CAPITAL REPLACEMENT					
(Note: Purchased discounted @ 8% per annum).					
On-Board Equipment	$76,886	$76,886	$76,886	$76,886	$76,886
Vehicles and Maintenance	$52,846	$52,846	$52,846	$52,846	$52,846
Communications	$8,115	$8,115	$8,115	$8,115	$8,115
Office Billing Furniture	$6,711	$6,711	$6,711	$6,711	$6,711
	$144,558	$144,558	$144,558	$144,558	$144,558

Saskatchewan Emergency Medical Services (EMS) Development Project

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Summary of Key Operating and Cost Statistics (All Calls)

	394 30	395 30	401 30	403 30	410 30
	Hudson Bay	Porcupine Plain	Wakaw	Rosthern	Unity
RETURN ON WORKING CAPITAL (@ 8%) **(Note: Based on 30 days' of working capital)**	$3,390	$3,413	$3,440	$3,476	$4,388
TOTAL OPERATING EXPENSES	$662,093	$665,677	$669,702	$675,156	$814,393
ONE-TIME CAPITAL COSTS	$513,080	$513,080	$513,080	$513,080	$513,080

Saskatchewan Emergency Medical Services (EMS) Development Project

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Summary of Key Operating and Cost Statistics (All Calls)

	427 30	428 20	434 30	437 21	439 30
	Tisdale	Melfort	Blaine Lake	North Battleford	Cut Knife
KEY OPERATING STATISTICS					
Those that Directly Impact Cost Calculation					
Annual (emergent and non-emergent) calls	440.33	651.67	262.67	2,068.33	126.00
Unit-hrs. used	1,592.93	1,402.49	789.91	3,252.52	348.70
Unit-hrs. required	9,204.00	8,736.00	8,736.00	17,472.00	8,736.00
Field staff mix:					
E.M.R	-	-	-	-	50%
E.M.T	50%	50%	100%	50%	50%
E.M.T.A	50%	50%	-	50%	-
E.M.T.P	-	-	-	-	-
Ambulances (including inventory @ 30%)	3	2	2	3	2
No. of Stations	1	1	1	2	1
Estimated kilometres per unit-hr used	43.5	41.8	51.5	50.3	47.2
Estimated kilometres	69,272	58,588	40,711	163,548	16,453
Those that Do Not Directly Impact Cost Calculation					
Average Pct. Time on Task (also referred to as Unit-hour Utilization (UHU))	17.31%	16.05%	9.04%	18.62%	3.99%
Average Time-on-Task (hrs.)	3.62	2.15	3.01	1.57	2.77
Calls per Unit-Hour	0.0478	0.0746	0.0301	0.1184	0.0144
Average annual kilometres per ambulance	23,091	29,294	20,356	54,516	8,227
Total (Ambulances and Supervisory) Vehicles	4	3	3	4	3
STAFFING AND ANNUAL OPERATING EXPENSES					
FIELD STAFF					
Regular Full-Time Equivalents (FTE's)					
E.M.R	-	-	-	-	4.00
E.M.T	4.21	4.00	8.00	8.00	4.00
E.M.T.A	4.21	4.00	-	8.00	-
E.M.T.P	-	-	-	-	-
	8.43	8.00	8.00	16.00	8.00
Relief Full-Time Equivalents (FTE's)					
E.M.R	-	-	-	-	0.80
E.M.T	0.85	0.80	1.61	1.61	0.80
E.M.T.A	0.85	0.80	-	1.61	-
E.M.T.P	-	-	-	-	-
	1.69	1.61	1.61	3.21	1.61

Saskatchewan Emergency Medical Services (EMS) Development Project

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Summary of Key Operating and Cost Statistics (All Calls)

	427 30	428 20	434 30	437 21	439 30
	Tisdale	Melfort	Blaine Lake	North Battleford	Cut Knife
Regular and Relief Full-Time Equivalents (FTE's)					
E.M.R	-	-	-	-	4.80
E.M.T	5.06	4.80	9.61	9.61	4.80
E.M.T.A	5.06	4.80	-	9.61	-
E.M.T.P	-	-	-	-	-
	10.12	9.61	9.61	19.21	9.61
ADMINISTRATIVE PERSONNEL (FTE'S)					
Director	-	-	-	1.00	-
Finance Director	-	-	-	-	-
Billing/Collection Manager	-	-	-	1.00	-
Billing & Collection Clerical	1.00	1.00	1.00	1.00	1.00
Admin Asst.	0.50	0.50	0.50	1.00	0.50
Admin Support	-	-	-	-	-
Community Support	-	-	-	-	-
Quality Training Officer	0.50	0.50	0.50	1.00	0.50
MIS Coordinator	-	-	-	-	-
MIS Staff	-	-	-	-	-
	2.00	2.00	2.00	5.00	2.00
OPERATIONS PERSONNEL (FTE'S)					
Operations Manager	1.00	1.00	1.00	1.00	1.00
Maintenance Manager	-	-	-	-	-
Logistics Manager	-	-	-	-	-
Maintenance Staff	-	-	-	0.50	-
Logistics Service Technicians	-	-	-	-	-
Field Supervisor	-	-	-	4.00	-
	1.00	1.00	1.00	5.50	1.00
TOTAL FULL-TIME EQUIVALENTS (FTE'S)	13.12	12.61	12.61	29.71	12.61
AVERAGE SALARY					
(including premium pays, overtime, call-back, standby, etc.)	$37,688	$37,674	$36,034	$39,658	$31,546
TOTAL SALARIES					
(including premium pays, overtime, call-back, standby, etc.)	$494,531	$474,954	$454,282	$1,178,407	$397,698
EMPLOYEE BENEFITS (@ 17% OF SALARIES)	$84,070	$80,742	$77,228	$200,329	$67,609
SALARIES AND EMPLOYEE BENEFITS	$578,602	$555,696	$531,510	$1,378,736	$465,307
NON-SALARY EXPENSES	$119,643	$115,892	$82,250	$281,453	$51,015
CAPITAL REPLACEMENT					
(Note: Purchased discounted @ 8% per annum).					
On-Board Equipment	$106,223	$76,886	$76,886	$106,223	$76,886
Vehicles and Maintenance	$74,260	$52,846	$52,846	$74,260	$52,846
Communications	$10,532	$8,115	$8,115	$10,532	$8,115
Office Billing Furniture	$6,711	$6,711	$6,711	$9,216	$6,711
	$197,726	$144,558	$144,558	$200,231	$144,558

Saskatchewan Emergency Medical Services (EMS) Development Project

Attachment K

Summary of Key Operating and Cost Statistics (All Calls)

	427 30	428 20	434 30	437 21	439 30
	Tisdale	Melfort	Blaine Lake	North Battleford	Cut Knife
RETURN ON WORKING CAPITAL (@ 8%) **(Note: Based on 30 days' of working capital)**	$4,604	$4,428	$4,047	$10,946	$3,404
TOTAL OPERATING EXPENSES	$900,575	$820,574	$762,365	$1,871,367	$664,285
ONE-TIME CAPITAL COSTS	$698,254	$513,080	$513,080	$708,254	$513,080

Saskatchewan Emergency Medical Services (EMS) Development Project

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Summary of Key Operating and Cost Statistics (All Calls)

	461 22	471 30	486 30	487 30	493 30
	Prince Albert	Maidstone	Carrot River	Nipawin	Shellbrook
KEY OPERATING STATISTICS					
Those that Directly Impact Cost Calculation					
Annual (emergent and non-emergent) calls	4,263.67	133.33	293.33	552.67	261.00
Unit-hrs. used	5,490.22	425.53	833.63	1,269.76	702.19
Unit-hrs. required	19,708.00	8,736.00	8,736.00	8,788.00	8,736.00
Field staff mix:					
E.M.R	-	50%	-	-	50%
E.M.T	50%	50%	100%	50%	50%
E.M.T.A	-	-	-	50%	-
E.M.T.P	50%	-	-	-	-
Ambulances (including inventory @ 30%)	4	2	2	3	2
No. of Stations	2	1	1	1	1
Estimated kilometres per unit-hr used	47.5	53.2	54.3	32.2	55.7
Estimated kilometres	260,882	22,642	45,260	40,841	39,078
Those that Do Not Directly Impact Cost Calculation					
Average Pct. Time on Task (also referred to as Unit-hour Utilization (UhU))	27.86%	4.87%	9.54%	14.45%	8.04%
Average Time-on-Task (hrs.)	1.29	3.19	2.84	2.30	2.69
Calls per Unit-Hour	0.2163	0.0153	0.0336	0.0629	0.0299
Average annual kilometres per ambulance	65,221	11,321	22,630	13,614	19,539
Total (Ambulances and Supervisory) Vehicles	5	3	3	4	3
STAFFING AND ANNUAL OPERATING EXPENSES					
FIELD STAFF					
Regular Full-Time Equivalents (FTE's)					
E.M.R	-	4.00	-	-	4.00
E.M.T	9.02	4.00	8.00	4.02	4.00
E.M.T.A	-	-	-	4.02	-
E.M.T.P	9.02	-	-	-	-
	18.05	8.00	8.00	8.05	8.00
Relief Full-Time Equivalents (FTE's)					
E.M.R	-	0.80	-	-	0.80
E.M.T	1.81	0.80	1.61	0.81	0.80
E.M.T.A	-	-	-	0.81	-
E.M.T.P	1.81	-	-	-	-
	3.63	1.61	1.61	1.62	1.61

Saskatchewan Emergency Medical Services (EMS) Development Project

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Summary of Key Operating and Cost Statistics (All Calls)

	461 22	471 30	486 30	487 30	493 30
	Prince Albert	Meadstone	Carrot River	Nipawin	Shellbrook
Regular and Relief Full-Time Equivalents (FTE's)					
E.M.R	-	4.80	-	-	4.80
E.M.T	10.84	4.80	9.61	4.83	4.80
E.M.T.A	-	-	-	4.83	-
E.M.T.P	10.84	-	-	-	-
	21.67	9.61	9.61	9.66	9.61
ADMINISTRATIVE PERSONNEL (FTE'S)					
Director	1.00	-	-	-	-
Finance Director	-	-	-	-	-
Billing/Collection Manager	1.00	-	-	-	-
Billing & Collection Clerical	1.00	1.00	1.00	1.00	1.00
Admin Asst.	1.00	0.50	0.50	0.50	0.50
Admin Support	-	-	-	-	-
Community Support	-	-	-	-	-
Quality Training Officer	1.00	0.50	0.50	0.50	0.50
MIS Coordinator	-	-	-	-	-
MIS Staff	-	-	-	-	-
	5.00	2.00	2.00	2.00	2.00
OPERATIONS PERSONNEL (FTE'S)					
Operations Manager	1.00	1.00	1.00	1.00	1.00
Maintenance Manager	-	-	-	-	-
Logistics Manager	-	-	-	-	-
Maintenance Staff	0.50	-	-	-	-
Logistics Service Technicians	-	-	-	-	-
Field Supervisor	4.00	-	-	-	-
	5.50	1.00	1.00	1.00	1.00
TOTAL FULL-TIME EQUIVALENTS (FTE'S)	32.17	12.61	12.61	12.66	12.61
AVERAGE SALARY					
(including premium pays, overtime, call-back, standby, etc.)	$41,242	$31,546	$36,034	$37,675	$31,546
TOTAL SALARIES					
(including premium pays, overtime, call-back, standby, etc.)	$1,326,888	$397,698	$454,282	$477,129	$397,698
EMPLOYEE BENEFITS (@ 17% OF SALARIES)	$225,571	$67,609	$77,228	$81,112	$67,609
SALARIES AND EMPLOYEE BENEFITS	$1,552,459	$465,307	$531,510	$558,241	$465,307
NON-SALARY EXPENSES	$467,472	$57,970	$88,293	$93,077	$80,425
CAPITAL REPLACEMENT					
(Note: Purchased discounted @ 8% per annum).					
On-Board Equipment	$133,952	$76,886	$76,886	$106,223	$76,886
Vehicles and Maintenance	$95,674	$52,846	$52,846	$74,260	$52,846
Communications	$12,573	$8,115	$8,115	$10,532	$8,115
Office Billing Furniture	$9,216	$6,711	$6,711	$6,711	$6,711
	$251,415	$144,558	$144,558	$197,726	$144,558

Saskatchewan Emergency Medical Services (EMS) Development Project

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Summary of Key Operating and Cost Statistics (All Calls)

	461 22	471 30	486 30	487 30	493 30
	Prince Albert	Meadow Lake	Carrot River	Nipawin	Shellbrook
RETURN ON WORKING CAPITAL (@ 8%) **(Note: Based on 30 days' of working capital)**	$13,318	$3,450	$4,087	$4,294	$3,598
TOTAL OPERATING EXPENSES	$2,284,664	$671,286	$768,448	$853,339	$693,889
ONE-TIME CAPITAL COSTS	$887,251	$513,080	$513,080	$698,254	$513,080

Saskatchewan Emergency Medical Services (EMS) Development Project

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Summary of Key Operating and Cost Statistics (All Calls)

	494 51	496 30	501 30	502 29	555 30
	Carwood	Spiritwood	St. Walburg	Lloydminster	Big River
KEY OPERATING STATISTICS					
Those that Directly Impact Cost Calculation					
Annual (emergent and non-emergent) calls	262.33	343.67	726.00	513.33	129.00
Unit-hrs. used	631.91	987.51	2,442.28	1,359.30	454.32
Unit-hrs. required	8,736.00	8,736.00	11,180.00	8,736.00	8,736.00
Field staff mix:					
E.M.R	50%	-	-	-	50%
E.M.T	50%	100%	50%	50%	50%
E.M.T.A	-	-	50%	50%	-
E.M.T.P	-	-	-	-	-
Ambulances (including inventory @ 30%)	2	2	3	2	2
No. of Stations	1	1	1	1	1
Estimated kilometres per unit-hr used	51.8	48.9	51.7	39.2	44.3
Estimated kilometres	32,739	48,252	126,164	53,346	20,115
Those that Do Not Directly Impact Cost Calculation					
Average Pct. Time on Task (also referred to as Unit-hour Utilization (UhU))	7.23%	11.30%	21.85%	15.56%	5.20%
Average Time-on-Task (hrs.)	2.41	2.87	3.36	2.65	3.52
Calls per Unit-Hour	0.0300	0.0393	0.0649	0.0588	0.0148
Average annual kilometres per ambulance	16,370	24,126	42,055	26,673	10,058
Total (Ambulances and Supervisory) Vehicles	3	3	4	3	3
STAFFING AND ANNUAL OPERATING EXPENSES					
FIELD STAFF					
Regular Full-Time Equivalents (FTE's)					
E.M.R	4.00	-	-	-	4.00
E.M.T	4.00	8.00	5.12	4.00	4.00
E.M.T.A	-	-	5.12	4.00	-
E.M.T.P	-	-	-	-	-
	8.00	8.00	10.24	8.00	8.00
Relief Full-Time Equivalents (FTE's)					
E.M.R	0.80	-	-	-	0.80
E.M.T	0.80	1.61	1.03	0.80	0.80
E.M.T.A	-	-	1.03	0.80	-
E.M.T.P	-	-	-	-	-
	1.61	1.61	2.06	1.61	1.61

Saskatchewan Emergency Medical Services (EMS) Development Project

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Summary of Key Operating and Cost Statistics (All Calls)

	494 51	496 30	501 30	502 29	555 30
	Canwood	Spiritwood	St. Walburg	Lloydminster	Big River
Regular and Relief Full-Time Equivalents (FTE's)					
E.M.R	4.80	-	-	-	4.80
E.M.T	4.80	9.61	6.15	4.80	4.80
E.M.T.A	-	-	6.15	4.80	-
E.M.T.P	-	-	-	-	-
	9.61	9.61	12.29	9.61	9.61
ADMINISTRATIVE PERSONNEL (FTE'S)					
Director	-	-	-	-	-
Finance Director	-	-	-	-	-
Billing/Collection Manager	-	-	-	-	-
Billing & Collection Clerical	1.00	1.00	1.00	1.00	1.00
Admin Asst.	0.50	0.50	0.50	0.50	0.50
Admin Support	-	-	-	-	-
Community Support	-	-	-	-	-
Quality/Training Officer	0.50	0.50	0.50	0.50	0.50
MIS Coordinator	-	-	-	-	-
MIS Staff	-	-	-	-	-
	2.00	2.00	2.00	2.00	2.00
OPERATIONS PERSONNEL (FTE'S)					
Operations Manager	1.00	1.00	1.00	1.00	1.00
Maintenance Manager	-	-	-	-	-
Logistics Manager	-	-	-	-	-
Maintenance Staff	-	-	-	-	-
Logistics Service Technicians	-	-	-	-	-
Field Supervisor	-	-	-	-	-
	1.00	1.00	1.00	1.00	1.00
TOTAL FULL-TIME EQUIVALENTS (FTE'S)	12.61	12.61	15.29	12.61	12.61
AVERAGE SALARY					
(including premium pays, overtime, call-back, standby, etc.)	$31,546	$36,034	$37,738	$37,674	$31,546
TOTAL SALARIES					
(including premium pays, overtime, call-back, standby, etc.)	$397,698	$454,282	$577,194	$474,954	$397,698
EMPLOYEE BENEFITS (@ 17% OF SALARIES)	$67,609	$77,228	$98,123	$80,742	$67,609
SALARIES AND EMPLOYEE BENEFITS	$465,307	$531,510	$675,317	$555,696	$465,307
NON-SALARY EXPENSES	$73,628	$93,379	$191,613	$105,133	$55,081
CAPITAL REPLACEMENT					
(Note: Purchased discounted @ 8% per annum).					
On-Board Equipment	$76,886	$76,886	$106,223	$76,886	$76,886
Vehicles and Maintenance	$52,846	$52,846	$74,260	$52,846	$52,846
Communications	$8,115	$8,115	$10,532	$8,115	$8,115
Office Billing Furniture	$6,711	$6,711	$6,711	$6,711	$6,711
	$144,558	$144,558	$197,726	$144,558	$144,558

Saskatchewan Emergency Medical Services (EMS) Development Project

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Summary of Key Operating and Cost Statistics (All Calls)

	494 51	496 30	501 30	502 29	535 30
	Carwood	Spiritwood	St. Walburg	Lloydminster	Big River
RETURN ON WORKING CAPITAL (@ 8%) **(Note: Based on 30 days' of working capital)**	$3,553	$4,120	$5,716	$4,357	$3,431
TOTAL OPERATING EXPENSES	$687,047	$773,568	$1,070,372	$809,744	$668,378
ONE-TIME CAPITAL COSTS	$513,080	$513,080	$698,254	$513,080	$513,080

Saskatchewan Emergency Medical Services (EMS) Development Project

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Summary of Key Operating and Cost Statistics (All Calls)

	561 58 Loon Lake	588 30 Meadow Lake	TOTAL
KEY OPERATING STATISTICS			
Those that Directly Impact Cost Calculation			
Annual (emergent and non-emergent) calls	140.00	524.67	70,997.00
Unit-hrs. used	645.33	1,460.63	132,153.92
Unit-hrs. required	8,736.00	8,736.00	726,804.00
Field staff mix:			
E.M.R	50%	-	n/a
E.M.T	50%	50%	n/a
E.M.T.A	-	50%	n/a
E.M.T.P	-	-	n/a
Ambulances (including inventory @ 30%)	2	2	171
No. of Stations	1	1	76
Estimated kilometres per unit-hr used	71.0	57.9	45.1
Estimated kilometres	45,832	84,502	5,965,114
Those that Do Not Directly Impact Cost Calculation			
Average Pct. Time on Task (also referred to as Unit-hour Utilization (UhU))	7.39%	16.72%	18.18%
Average Time-on-Task (hrs.)	4.61	2.78	1.86
Calls per Unit-Hour	0.0160	0.0601	0.0977
Average annual kilometres per ambulance	22,916	42,251	34,884
Total (Ambulances and Supervisory) Vehicles	3	3	240
STAFFING AND ANNUAL OPERATING EXPENSES			
FIELD STAFF			
Regular Full-Time Equivalents (FTE's)			
E.M.R	4.00	-	100.00
E.M.T	4.00	4.00	428.79
E.M.T.A	-	4.00	68.14
E.M.T.P	-	-	68.64
	8.00	8.00	665.57
Relief Full-Time Equivalents (FTE's)			
E.M.R	0.80	-	20.09
E.M.T	0.80	0.80	86.13
E.M.T.A	-	0.80	13.69
E.M.T.P	-	-	13.79
	1.61	1.61	133.70

Saskatchewan Emergency Medical Services (EMS) Development Project

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Summary of Key Operating and Cost Statistics (All Calls)

	561 58	588 30	
	Loon Lake	Meadow Lake	TOTAL
Regular and Relief Full-Time Equivalents (FTE's)			
E.M.R	4.80	-	120.09
E.M.T	4.80	4.80	514.92
E.M.T.A	-	4.80	81.83
E.M.T.P	-	-	82.43
	9.61	9.61	799.27
ADMINISTRATIVE PERSONNEL (FTE'S)			
Director	-	-	7.00
Finance Director	-	-	-
Billing/Collection Manager	-	-	7.00
Billing & Collection Clerical	1.00	1.00	67.00
Admin Asst.	0.50	0.50	37.00
Admin Support	-	-	-
Community Support	-	-	-
Quality Training Officer	0.50	0.50	37.00
MIS Coordinator	-	-	-
MIS Staff	-	-	-
	2.00	2.00	155.00
OPERATIONS PERSONNEL (FTE'S)			
Operations Manager	1.00	1.00	67.00
Maintenance Manager	-	-	-
Logistics Manager	-	-	-
Maintenance Staff	-	-	3.50
Logistics Service Technicians	-	-	-
Field Supervisor	-	-	28.00
	1.00	1.00	98.50
TOTAL FULL-TIME EQUIVALENTS (FTE'S)	12.61	12.61	1,052.77
AVERAGE SALARY *(including premium pays, overtime, call-back, standby, etc.)*	$31,546	$37,674	$36,188
TOTAL SALARIES *(including premium pays, overtime, call-back, standby, etc.)*	$397,698	$474,954	$38,097,374
EMPLOYEE BENEFITS (@ 17% OF SALARIES)	$67,609	$80,742	$6,476,554
SALARIES AND EMPLOYEE BENEFITS	$465,307	$555,696	$44,573,928
NON-SALARY EXPENSES	$83,261	$139,199	$10,974,964
CAPITAL REPLACEMENT			
(Note: Purchased discounted @ 8% per annum).			
On-Board Equipment	$76,886	$76,886	$6,313,428
Vehicles and Maintenance	$52,846	$52,846	$4,353,058
Communications	$8,115	$8,115	$634,311
Office Billing Furniture	$6,711	$6,711	$472,191
	$144,558	$144,558	$11,772,988

	561 58	588 30	
	Loon Lake	Meadow Lake	TOTAL
RETURN ON WORKING CAPITAL (@ 8%) **(Note: Based on 30 days' of working capital)**	$3,617	$4,582	$366,256
TOTAL OPERATING EXPENSES	$696,743	$844,035	$67,688,136
ONE-TIME CAPITAL COSTS	$513,080	$513,080	$41,670,865

Saskatchewan Emergency Medical Services (EMS) Development Project

Attachment K

Summary of Key Operating and Cost Statistics (All Calls)

	1	2	3	4	5
	Carlyle, Estevan, Oxbow	Assiniboia, Bengough, Gravelbourg	Fillmore, Weyburn	Maple Creek, Pennix, Shaunavon, Swift Current	Broadview, Esterhazy, Kipling, Moosomin, Whitewood
KEY OPERATING STATISTICS					
Those that Directly Impact Cost Calculation					
Annual (emergent and non-emergent) calls	1,633.67	1,038.33	1,203.00	2,084.00	1,263.33
Unit-hrs. used	4,548.53	2,719.34	2,047.68	5,608.57	3,519.87
Unit-hrs. required	27,196.00	26,208.00	17,576.00	38,012.00	43,680.00
Field staff mix:					
E.M.R	-	16.67%	-	11.19%	20.00%
E.M.T	66.03%	83.33%	74.85%	72.37%	80.00%
E.M.T.A	33.97%	-	25.15%	16.44%	-
E.M.T.P	-	-	-	-	-
Ambulances (including inventory @ 30%)	6	4	4	7	7
No. of Stations	3	3	2	4	5
Estimated kilometres per unit-hr used	48.2	51.8	44.9	52.1	47.8
Estimated kilometres	219,170	140,920	92,021	292,444	168,353
Those that Do Not Directly Impact Cost Calculation					
Average Pct. Time on Task (also referred to as Unit-hour Utilization (UhU))	16.72%	10.38%	11.65%	14.75%	8.06%
Average Time-on-Task (hrs.)	2.78	2.62	1.70	2.69	2.79
Calls per Unit-Hour	0.0601	0.0396	0.0684	0.0548	0.0289
Average annual kilometres per ambulance	36,528	35,230	23,005	41,778	24,050
Total (Ambulances and Supervisory) Vehicles	7	5	5	8	8
STAFFING AND ANNUAL OPERATING EXPENSES					
FIELD STAFF	24.95	24.00	16.10	35.76	40.00
Regular Full-Time Equivalents (FTE's)					
E.M.R	-	4.00	-	3.89	8.00
E.M.T	16.44	20.00	12.05	25.19	32.00
E.M.T.A	8.46	-	4.05	5.72	-
E.M.T.P	-	-	-	-	-
	24.90	24.00	16.10	34.81	40.00
Relief Full-Time Equivalents (FTE's)					
E.M.R	-	0.80	-	0.78	1.61
E.M.T	3.30	4.02	2.42	5.06	6.43
E.M.T.A	1.70	-	0.81	1.15	-
E.M.T.P	-	-	-	-	-
	5.00	4.82	3.23	6.99	8.03

Saskatchewan Emergency Medical Services (EMS) Development Project

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Summary of Key Operating and Cost Statistics (All Calls)

	1	2	3	4	5
	Carlyle, Estevan, Oxbow	Assiniboia, Bengough, Gravelbourg	Fillmore, Weyburn	Maple Creek, Ponteix, Shaunavon, Swift Current	Broadview, Esterhazy, Kipling, Moosomin, Whitewood
Regular and Relief Full-Time Equivalents (FTE's)					
E.M.R	-	4.80	-	4.68	9.61
E.M.T	19.75	24.02	14.47	30.25	38.43
E.M.T.A	10.16	-	4.86	6.87	-
E.M.T.P	-	-	-	-	-
	29.91	28.82	19.33	41.80	48.03
ADMINISTRATIVE PERSONNEL (FTE'S)					
Director	-	-	-	1.00	-
Finance Director	-	-	-	-	-
Billing/Collection Manager	-	-	-	1.00	-
Billing & Collection Clerical	2.00	2.00	2.00	2.00	2.00
Admin Asst.	1.00	1.00	1.00	1.00	1.00
Admin Support	-	-	-	-	-
Community Support	-	-	-	-	-
Quality Training Officer	1.00	1.00	1.00	1.00	1.00
MIS Coordinator	-	-	-	-	-
MIS Staff	-	-	-	-	-
	4.00	4.00	4.00	6.00	4.00
OPERATIONS PERSONNEL (FTE'S)					
Operations Manager	1.00	1.00	1.00	1.00	1.00
Maintenance Manager	-	-	-	-	-
Logistics Manager	-	-	-	-	-
Maintenance Staff	-	-	-	0.50	-
Logistics/Service Technicians	-	-	-	-	-
Field Supervisor	-	-	-	4.00	-
	1.00	1.00	1.00	5.50	1.00
TOTAL FULL-TIME EQUIVALENTS (FTE'S)	34.91	33.82	24.33	53.30	53.03
AVERAGE SALARY *(including premium pays, overtime, call-back, standby, etc.)*	$37,214	$34,291	$36,854	$36,907	$33,803
TOTAL SALARIES *(including premium pays, overtime, call-back, standby, etc.)*	$1,299,060	$1,159,762	$896,586	$1,967,218	$1,792,743
EMPLOYEE BENEFITS (@ 17% OF SALARIES)	$220,840	$197,160	$152,420	$334,427	$304,766
SALARIES AND EMPLOYEE BENEFITS	$1,519,900	$1,356,922	$1,049,006	$2,301,645	$2,097,509
NON-SALARY EXPENSES	$382,713	$276,265	$200,919	$507,047	$371,390
CAPITAL REPLACEMENT					
(Note: Purchased discounted @ 8% per annum).					
On-Board Equipment	$210,838	$133,952	$133,952	$240,175	$240,175
Vehicles and Maintenance	$138,502	$95,674	$95,674	$159,916	$159,916
Communications	$23,055	$17,307	$14,940	$27,839	$30,205
Office Billing Furniture	$20,134	$20,134	$13,422	$26,845	$33,556
	$392,529	$267,067	$257,989	$454,775	$463,853

Saskatchewan Emergency Medical Services (EMS) Development Project

Attachment K

Summary of Key Operating and Cost Statistics (All Calls)

	1 Carlyle, Esterhazy, Oxbow	2 Assiniboia, Bengough, Gravelbourg	3 Filmore, Weyburn	4 Maple Creek, Ponteix, Shaunavon, Swift Current	5 Broadview, Esterhazy, Kipling, Moosomin, Whitewood
RETURN ON WORKING CAPITAL (@ 8%) **(Note: Based on 30 days' of working capital)**	$12,545	$10,768	$8,241	$18,519	$16,278
TOTAL OPERATING EXPENSES	$2,307,687	$1,911,023	$1,516,155	$3,281,986	$2,949,031
ONE-TIME CAPITAL COSTS	$1,387,331	$951,251	$914,251	$1,609,505	$1,646,505

Saskatchewan Emergency Medical Services (EMS) Development Project

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Summary of Key Operating and Cost Statistics (All Calls)

	6 Cupar, Fort Qu'Appelle, Indian Head, Moose Jaw, Regina, Strasbourg	7 Biggar, Central Butte, Davidson, Outlook, Rosetown	8 Melville, Yorkton	9 Estevan, Kerrobert, Kindersley, Leader	10 Elfros, Leross, Punnichy
KEY OPERATING STATISTICS					
Those that Directly Impact Cost Calculation					
Annual (emergent and non-emergent) calls	23,803.67	1,151.00	2,705.33	834.67	1,335.00
Unit-hrs. used	33,771.24	3,105.16	6,205.84	2,839.29	3,719.84
Unit-hrs. required	101,452.00	43,680.00	25,480.00	34,944.00	26,988.00
Field staff mix:					
E.M.R	8.16%	40.00%	-	37.50%	-
E.M.T	58.16%	60.00%	66.63%	62.50%	82.37%
E.M.T.A	-	-	33.37%	-	17.63%
E.M.T.P	33.69%	-	-	-	-
Ambulances (including inventory @ 30%)	21	7	6	6	6
No. of Stations	10	5	2	4	3
Estimated kilometres per unit-hr used	40.3	46.0	39.4	54.5	58.1
Estimated kilometres	1,361,251	142,769	244,276	154,722	216,163
Those that Do Not Directly Impact Cost Calculation					
Average Pct. Time on Task (also referred to as Unit-hour Utilization (UHU))	33.29%	7.11%	24.36%	8.13%	13.78%
Average Time-on-Task (hrs.)	1.42	2.70	2.29	3.40	2.79
Calls per Unit-Hour	0.2346	0.0264	0.1062	0.0239	0.0495
Average annual kilometres per ambulance	64,821	20,396	40,713	25,787	36,027
Total (Ambulances and Supervisory) Vehicles	24	8	7	7	7
STAFFING AND ANNUAL OPERATING EXPENSES					
FIELD STAFF	98.10	40.00	24.05	32.00	24.71
Regular Full-Time Equivalents (FTE's)					
E.M.R	7.58	16.00	-	12.00	-
E.M.T	54.03	24.00	15.55	20.00	20.36
E.M.T.A	-	-	7.79	-	4.36
E.M.T.P	31.30	-	-	-	-
	92.90	40.00	23.33	32.00	24.71
Relief Full-Time Equivalents (FTE's)					
E.M.R	1.52	3.21	-	2.41	-
E.M.T	10.85	4.82	3.12	4.02	4.09
E.M.T.A	-	-	1.56	-	0.88
E.M.T.P	6.29	-	-	-	-
	18.66	8.03	4.69	6.43	4.96

Saskatchewan Emergency Medical Services (EMS) Development Project

Attachment K

Summary of Key Operating and Cost Statistics (All Calls)

	6	7	8	9	10
	Cupar, Fort Qu'Appelle, Indian Head, Moose Jaw, Regina, Strasbourg	Biggar, Central Butte, Davidson, Outlook, Rosetown	Melville, Yorkton	Estevan, Kerrobert, Kindersley, Leader	Elfros, Lanigan, Punnichy
Regular and Relief Full-Time Equivalents (FTE's)					
E.M.R	9.10	19.21	-	14.41	-
E.M.T	64.88	28.82	18.67	24.02	24.45
E.M.T.A	-	-	9.35	-	5.23
E.M.T.P	37.59	-	-	-	-
	111.57	48.03	28.02	38.43	29.68
ADMINISTRATIVE PERSONNEL (FTE'S)					
Director	1.00	-	1.00	-	-
Finance Director	-	-	-	-	-
Billing/Collection Manager	1.00	-	1.00	-	-
Billing & Collection Clerical	2.00	2.00	2.00	2.00	2.00
Admin Asst.	1.00	1.00	1.00	1.00	1.00
Admin Support	-	-	-	-	-
Community Support	-	-	-	-	-
Quality Training Officer	1.00	1.00	1.00	1.00	1.00
MIS Coordinator	-	-	-	-	-
MIS Staff	-	-	-	-	-
	6.00	4.00	6.00	4.00	4.00
OPERATIONS PERSONNEL (FTE'S)					
Operations Manager	1.00	1.00	1.00	1.00	1.00
Maintenance Manager	-	-	-	-	-
Logistics Manager	-	-	-	-	-
Maintenance Staff	1.00	-	0.50	-	-
Logistics Service Technicians	-	-	-	-	-
Field Supervisor	5.00	-	4.00	-	-
	7.00	1.00	5.50	1.00	1.00
TOTAL FULL-TIME EQUIVALENTS (FTE'S)	124.57	53.03	39.52	43.43	34.68
AVERAGE SALARY *(including premium pays, overtime, call-back, standby, etc.)*	$38,591	$31,669	$38,925	$32,039	$36,612
TOTAL SALARIES *(including premium pays, overtime, call-back, standby, etc.)*	$4,807,123	$1,679,576	$1,538,349	$1,391,377	$1,269,647
EMPLOYEE BENEFITS (@ 17% OF SALARIES)	$817,211	$285,528	$261,519	$236,534	$215,840
SALARIES AND EMPLOYEE BENEFITS	$5,624,334	$1,965,104	$1,799,868	$1,627,911	$1,485,487
NON-SALARY EXPENSES	$2,518,934	$339,620	$420,716	$312,269	$368,460
CAPITAL REPLACEMENT					
(Note: Purchased discounted @ 8% per annum).					
On-Board Equipment	$718,919	$240,175	$210,838	$210,838	$210,838
Vehicles and Maintenance	$479,749	$159,916	$138,502	$138,502	$138,502
Communications	$68,563	$30,205	$20,688	$25,422	$23,055
Office Billing Furniture	$50,285	$33,556	$13,422	$26,845	$20,134
	$1,317,516	$463,853	$383,451	$401,607	$392,529

Saskatchewan Emergency Medical Services (EMS) Development Project

Attachment K

Summary of Key Operating and Cost Statistics (All Calls)

	6	7	8	9	10
	Cupar, Fort Qu'Appelle, Indian Head, Moose Jaw, Regina, Strasbourg	Biggar, Central Butte, Davidson, Outlook, Rosetown	Melville, Yorkton	Eston, Kerrobert, Kindersley, Leader	Elfros, Leross, Punnichy
RETURN ON WORKING CAPITAL (@ 8%) (Note: Based on 30 days' of working capital)	$53,692	$15,196	$14,641	$12,792	$12,224
TOTAL OPERATING EXPENSES	$9,514,477	$2,783,773	$2,618,676	$2,354,580	$2,258,700
ONE-TIME CAPITAL COSTS	$4,638,838	$1,646,505	$1,350,331	$1,424,331	$1,387,331

Saskatchewan Emergency Medical Services (EMS) Development Project

Attachment K

Summary of Key Operating and Cost Statistics (All Calls)

	11	12	13	14	1:
	Canora, Kamsack, Preeceville	Humboldt, Watrous, Watson	Northern, Saskatoon, Wakaw	Hudson Bay, Kelvington, Porcupine Plain	Cut Knife, North Battleford, Unity
KEY OPERATING STATISTICS					
Those that Directly Impact Cost Calculation					
Annual (emergent and non-emergent) calls	1,328.67	981.67	18,972.33	615.67	2,549.00
Unit-hrs. used	3,181.63	2,140.36	31,311.68	1,887.49	5,059.47
Unit-hrs. required	26,208.00	26,208.00	70,044.00	26,208.00	34,944.00
Field staff mix:					
E.M.R	-	33.33%	11.57%	33.33%	12.50%
E.M.T	100.00%	66.67%	50.00%	66.67%	50.00%
E.M.T.A	-	-	-	-	37.50%
E.M.T.P	-	-	38.43%	-	-
Ambulances (including inventory @ 30%)	4	4	17	4	6
No. of Stations	3	3	6	3	4
Estimated kilometres per unit-hr used	43.6	45.6	43.8	49.9	48.0
Estimated kilometres	138,571	97,668	1,371,365	94,160	243,037
Those that Do Not Directly Impact Cost Calculation					
Average Pct. Time on Task (also referred to as Unit-hour Utilization (UhU))	12.14%	8.17%	44.70%	7.20%	14.48%
Average Time-on-Task (hrs.)	2.39	2.18	1.65	3.07	1.98
Calls per Unit-Hour	0.0507	0.0375	0.2709	0.0235	0.0729
Average annual kilometres per ambulance	34,643	24,417	80,669	23,540	40,506
Total (Ambulances and Supervisory) Vehicles	5	5	20	5	7
STAFFING AND ANNUAL OPERATING EXPENSES					
FIELD STAFF	24.00	24.00	69.14	24.00	32.00
Regular Full-Time Equivalents (FTE's)					
E.M.R	-	8.00	7.42	8.00	4.00
E.M.T	24.00	16.00	32.07	16.00	16.00
E.M.T.A	-	-	-	-	12.00
E.M.T.P	-	-	24.65	-	-
	24.00	24.00	64.14	24.00	32.00
Relief Full-Time Equivalents (FTE's)					
E.M.R	-	1.61	1.49	1.61	0.80
E.M.T	4.82	3.21	6.44	3.21	3.21
E.M.T.A	-	-	-	-	2.41
E.M.T.P	-	-	4.95	-	-
	4.82	4.82	12.88	4.82	6.43

Saskatchewan Emergency Medical Services (EMS) Development Project

Attachment K

Summary of Key Operating and Cost Statistics (All Calls)

	11	12	13	14	15
	Canora, Kamsack, Preeceville	Humboldt, Watrous, Watson	Northern, Saskatoon, Wakaw	Hudson Bay, Kelvington, Porcupine Plain	Cut Knife, North Battleford, Unity
Regular and Relief Full-Time Equivalents (FTE's)					
E.M.R	-	9.61	8.91	9.61	4.80
E.M.T	28.82	19.21	38.51	19.21	19.21
E.M.T.A	-	-	-	-	14.41
E.M.T.P	-	-	29.60	-	-
	28.82	28.82	77.03	28.82	38.43
ADMINISTRATIVE PERSONNEL (FTE'S)					
Director	-	-	1.00	-	1.00
Finance Director	-	-	-	-	-
Billing/Collection Manager	-	-	1.00	-	1.00
Billing & Collection Clerical	2.00	2.00	2.00	2.00	2.00
Admin Asst.	1.00	1.00	1.00	1.00	1.00
Admin Support	-	-	-	-	-
Community Support	-	-	-	-	-
Quality/Training Officer	1.00	1.00	1.00	1.00	1.00
MIS Coordinator	-	-	-	-	-
MIS Staff	-	-	-	-	-
	4.00	4.00	6.00	4.00	6.00
OPERATIONS PERSONNEL (FTE'S)					
Operations Manager	1.00	1.00	1.00	1.00	1.00
Maintenance Manager	-	-	-	-	-
Logistics Manager	-	-	-	-	-
Maintenance Staff	-	-	0.50	-	0.50
Logistics Service Technicians	-	-	-	-	-
Field Supervisor	-	-	4.00	-	4.00
	1.00	1.00	5.50	1.00	5.50
TOTAL FULL-TIME EQUIVALENTS (FTE'S)	33.82	33.82	88.53	33.82	49.93
AVERAGE SALARY *(including premium pays, overtime, call-back, standby, etc.)*	$35,964	$32,618	$38,738	$32,618	$37,595
TOTAL SALARIES *(including premium pays, overtime, call-back, standby, etc.)*	$1,216,346	$1,103,179	$3,429,401	$1,103,179	$1,877,059
EMPLOYEE BENEFITS (@ 17% OF SALARIES)	$206,779	$187,540	$582,998	$187,540	$319,100
SALARIES AND EMPLOYEE BENEFITS	$1,423,125	$1,290,719	$4,012,399	$1,290,719	$2,196,159
NON-SALARY EXPENSES	$284,427	$227,465	$2,266,014	$210,189	$442,220
CAPITAL REPLACEMENT					
(Note: Purchased discounted @ 8% per annum).					
On-Board Equipment	$133,952	$133,952	$584,966	$133,952	$210,838
Vehicles and Maintenance	$95,674	$95,674	$394,093	$95,674	$138,502
Communications	$17,307	$17,307	$51,256	$17,307	$23,055
Office Billing Furniture	$20,134	$20,134	$27,647	$20,134	$22,638
	$267,067	$267,067	$1,057,963	$267,067	$395,034

Saskatchewan Emergency Medical Services (EMS) Development Project

Attachment K

Summary of Key Operating and Cost Statistics (All Calls)

	11	12	13	14	1:
	Canora, Kamsack, Preeceville	Humboldt, Watrous, Watson	Rosthern, Saskatoon, Wakaw	Hudson Bay, Kelvington, Porcupine Plain	Cut Knife, North Battleford, Unity
RETURN ON WORKING CAPITAL (@ 8%) **(Note: Based on 30 days' of working capital)**	$11,259	$10,010	$41,396	$9,896	$17,396
TOTAL OPERATING EXPENSES	$1,985,877	$1,795,261	$7,377,772	$1,777,872	$3,050,809
ONE-TIME CAPITAL COSTS	$951,251	$951,251	$3,717,587	$951,251	$1,397,331

Saskatchewan Emergency Medical Services (EMS) Development Project

Attachment K

Summary of Key Operating and Cost Statistics (All Calls)

	16	17	18	19	2(
	Melfort, Tisdale	Big River, Blaine Lake, Canwood, Prince Albert, Shellbrook, Spiritwood	Lloydminster, Maidstone	Carrot River, Nipawin	Loon Lake, Meadow Lake, St. Walburg
KEY OPERATING STATISTICS					
Those that Directly Impact Cost Calculation					
Annual (emergent and non-emergent) calls	1,092.00	5,522.33	646.67	846.00	1,390.67
Unit-hrs. used	2,995.42	9,056.06	1,784.83	2,103.39	4,548.23
Unit-hrs. required	17,940.00	62,296.00	17,472.00	17,524.00	28,444.00
Field staff mix:					
E.M.R	-	20.67%	25.00%	-	15.25%
E.M.T	50.00%	63.78%	50.00%	74.93%	50.00%
E.M.T.A	50.00%	-	25.00%	25.07%	34.75%
E.M.T.P	-	15.55%	-	-	-
Ambulances (including inventory @ 30%)	4	11	3	4	6
No. of Stations	2	7	2	2	3
Estimated kilometres per unit-hr used	42.7	48.8	42.6	40.9	56.4
Estimated kilometres	127,860	441,777	75,988	86,101	256,498
Those that Do Not Directly Impact Cost Calculation					
Average Pct. Time on Task (also referred to as Unit-hour Utilization (UhU))	16.70%	14.54%	10.22%	12.00%	15.99%
Average Time-on-Task (hrs.)	2.74	1.64	2.76	2.49	3.27
Calls per Unit-Hour	0.0609	0.0886	0.0370	0.0483	0.0489
Average annual kilometres per ambulance	31,965	40,162	25,329	21,525	42,750
Total (Ambulances and Supervisory) Vehicles	5	13	4	5	7
STAFFING AND ANNUAL OPERATING EXPENSES					
FIELD STAFF	16.43	58.05	16.00	16.05	26.24
Regular Full-Time Equivalents (FTE's)					
E.M.R	-	11.79	4.00	-	3.97
E.M.T	8.21	36.39	8.00	12.02	13.02
E.M.T.A	8.21	-	4.00	4.02	9.05
E.M.T.P	-	8.87	-	-	-
	16.43	57.05	16.00	16.05	26.05
Relief Full-Time Equivalents (FTE's)					
E.M.R	-	2.37	0.80	-	0.80
E.M.T	1.65	7.31	1.61	2.42	2.62
E.M.T.A	1.65	-	0.80	0.81	1.82
E.M.T.P	-	1.78	-	-	-
	3.30	11.46	3.21	3.22	5.23

Saskatchewan Emergency Medical Services (EMS) Development Project

Attachment K

Summary of Key Operating and Cost Statistics (All Calls)

	16	17	18	19	2(
	Melfort, Tisdale	Big River, Blaine Lake, Canwood, Prince Albert, Shellbrook, Spiritwood	Lloydminster, Maidstone	Carrot River, Nipawin	Loon Lake, Meadow Lake, St. Walburg
Regular and Relief Full-Time Equivalents (FTE's)					
E.M.R	-	14.16	4.80	-	4.77
E.M.T	9.86	43.69	9.61	14.44	15.64
E.M.T.A	9.86	-	4.80	4.83	10.87
E.M.T.P	-	10.65	-	-	-
	19.73	68.51	19.21	19.27	31.28
ADMINISTRATIVE PERSONNEL (FTE'S)					
Director	-	1.00	-	-	-
Finance Director	-	-	-	-	-
Billing/Collection Manager	-	1.00	-	-	-
Billing & Collection Clerical	2.00	2.00	2.00	2.00	2.00
Admin Asst.	1.00	1.00	1.00	1.00	1.00
Admin Support	-	-	-	-	-
Community Support	-	-	-	-	-
Quality/Training Officer	1.00	1.00	1.00	1.00	1.00
MIS Coordinator	-	-	-	-	-
MIS Staff	-	-	-	-	-
	4.00	6.00	4.00	4.00	4.00
OPERATIONS PERSONNEL (FTE'S)					
Operations Manager	1.00	1.00	1.00	1.00	1.00
Maintenance Manager	-	-	-	-	-
Logistics Manager	-	-	-	-	-
Maintenance Staff	-	0.50	-	-	-
Logistics Service Technicians	-	-	-	-	-
Field Supervisor	-	4.00	-	-	-
	1.00	5.50	1.00	1.00	1.00
TOTAL FULL-TIME EQUIVALENTS (FTE'S)	24.73	80.01	24.21	24.27	36.28
AVERAGE SALARY *(including premium pays, overtime, call-back, standby, etc.)*	$37,709	$36,048	$34,511	$36,851	$35,700
TOTAL SALARIES *(including premium pays, overtime, call-back, standby, etc.)*	$932,485	$2,884,124	$835,652	$894,411	$1,295,205
EMPLOYEE BENEFITS (@ 17% OF SALARIES)	$158,522	$490,301	$142,061	$152,050	$220,185
SALARIES AND EMPLOYEE BENEFITS	$1,091,008	$3,374,425	$977,713	$1,046,461	$1,515,390
NON-SALARY EXPENSES	$235,535	$852,235	$163,103	$181,370	$414,073
CAPITAL REPLACEMENT					
(Note: Purchased discounted @ 8% per annum).					
On-Board Equipment	$133,952	$374,128	$106,223	$133,952	$210,838
Vehicles and Maintenance	$95,674	$255,591	$74,260	$95,674	$138,502
Communications	$14,940	$42,778	$12,899	$14,940	$23,055
Office Billing Furniture	$13,422	$42,772	$13,422	$13,422	$20,134
	$257,989	$715,269	$206,804	$257,989	$392,529

Saskatchewan Emergency Medical Services (EMS) Development Project

Attachment K

Summary of Key Operating and Cost Statistics (All Calls)

	16	17	18	19	2(
	Melfort, Tisdale	Big River, Blaine Lake, Canwood, Prince Albert, Shellbrook, Spiritwood	Lloydminster, Maidstone	Carrot River, Nipawin	Loon Lake, Meadow Lake, St. Walburg
RETURN ON WORKING CAPITAL (@ 8%) **(Note: Based on 30 days' of working capital)**	$8,746	$27,868	$7,522	$8,096	$12,722
TOTAL OPERATING EXPENSES	$1,593,278	$4,969,797	$1,355,142	$1,493,916	$2,334,714
ONE-TIME CAPITAL COSTS	$914,251	$2,533,756	$735,254	$914,251	$1,387,331

Saskatchewan Emergency Medical Services (EMS) Development Project

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Summary of Key Operating and Cost Statistics (All Calls)

	TOTAL
KEY OPERATING STATISTICS	
Those that Directly Impact Cost Calculation	
Annual (emergent and non-emergent) calls	70,997.00
Unit-hrs. used	132,153.92
Unit-hrs. required	712,504.00
Field staff mix:	
E.M.R	n/a
E.M.T	n/a
E.M.T.A	n/a
E.M.T.P	n/a
Ambulances (including inventory @ 30%)	137
No. of Stations	76
Estimated kilometres per unit-hr used	45.1
Estimated kilometres	5,965,114
Those that Do Not Directly Impact Cost Calculation	
Average Pct. Time on Task (also referred to as Unit-hour Utilization (UhU))	18.55%
Average Time-on-Task (hrs.)	1.86
Calls per Unit-Hour	0.0996
Average annual kilometres per ambulance	43,541
Total (Ambulances and Supervisory) Vehicles	162
STAFFING AND ANNUAL OPERATING EXPENSES	
FIELD STAFF	665.57
Regular Full-Time Equivalents (FTE's)	
E.M.R	98.66
E.M.T	421.34
E.M.T.A	67.67
E.M.T.P	64.82
	652.48
Relief Full-Time Equivalents (FTE's)	
E.M.R	19.82
E.M.T	84.64
E.M.T.A	13.59
E.M.T.P	13.02
	131.07

Saskatchewan Emergency Medical Services (EMS) Development Project

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Summary of Key Operating and Cost Statistics (All Calls)

	TOTAL
Regular and Relief Full-Time Equivalents (FTE's)	
E.M.R	118.47
E.M.T	505.97
E.M.T.A	81.26
E.M.T.P	77.84
	783.54
ADMINISTRATIVE PERSONNEL (FTE'S)	-
Director	6.00
Finance Director	-
Billing/Collection Manager	6.00
Billing & Collection Clerical	40.00
Admin Asst.	20.00
Admin Support	-
Community Support	-
Quality/Training Officer	20.00
MIS Coordinator	-
MIS Staff	-
	92.00
OPERATIONS PERSONNEL (FTE'S)	-
Operations Manager	20.00
Maintenance Manager	-
Logistics Manager	-
Maintenance Staff	3.50
Logistics/Service Technicians	-
Field Supervisor	25.00
	48.50
TOTAL FULL-TIME EQUIVALENTS (FTE'S)	924.04
AVERAGE SALARY	
(including premium pays, overtime, call-back, standby, etc.)	$36,116
TOTAL SALARIES	
(including premium pays, overtime, call-back, standby, etc.)	$33,372,483
EMPLOYEE BENEFITS (@ 17% OF SALARIES)	$5,673,322
SALARIES AND EMPLOYEE BENEFITS	$39,045,805
NON-SALARY EXPENSES	$10,974,964
CAPITAL REPLACEMENT	
(Note: Purchased discounted @ 8% per annum).	
On-Board Equipment	$4,707,459
Vehicles and Maintenance	$3,184,178
Communications	$516,121
Office/Billing Furniture	$472,191
	$8,879,949

Saskatchewan Emergency Medical Services (EMS) Development Project

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Summary of Key Operating and Cost Statistics (All Calls)

	TOTAL
RETURN ON WORKING CAPITAL (@ 8%) **(Note: Based on 30 days' of working capital)**	$329,807
TOTAL OPERATING EXPENSES	$59,230,525
ONE-TIME CAPITAL COSTS	$31,409,693

Saskatchewan Emergency Medical Services (EMS) Development Project

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Summary of Key Operating and Cost Statistics (All Calls)

	Estevan	North Battleford	Northwest	Prince Albert	Regina
KEY OPERATING STATISTICS					
Those that Directly Impact Cost Calculation					
Annual (emergent and non-emergent) calls	1,633.67	2,549.00	2,037.33	5,522.33	28,643.33
Unit-hrs. used	4,548.53	5,059.47	6,333.07	9,056.06	45,777.97
Unit-hrs. required	27,196.00	34,944.00	44,824.00	62,296.00	211,484.00
Field staff mix:					
E.M.R	-	12.50%	18.96%	20.67%	9.90%
E.M.T	66.03%	50.00%	50.00%	63.78%	70.02%
E.M.T.A	33.97%	37.50%	31.04%	-	4.25%
E.M.T.P	-	-	-	15.55%	15.83%
Ambulances (including inventory @ 30%)	6	6	8	11	39
No. of Stations	3	4	5	7	23
Estimated kilometres per unit-hr used	48.2	48.0	52.5	48.8	43.2
Estimated kilometres	219,170	243,037	332,486	441,777	1,978,708
Those that Do Not Directly Impact Cost Calculation					
Average Pct. Time on Task (also referred to as Unit-hour Utilization (UhU))	16.72%	14.48%	14.13%	14.54%	21.65%
Average Time-on-Task (hrs.)	2.78	1.98	3.11	1.64	1.60
Calls per Unit-Hour	0.0601	0.0729	0.0455	0.0886	0.1354
Average annual kilometres per ambulance	36,528	40,506	41,561	40,162	50,736
Total (Ambulances and Supervisory) Vehicles	7	7	9	13	44
STAFFING AND ANNUAL OPERATING EXPENSES					
FIELD STAFF					
Regular Full-Time Equivalents (FTE's)					
E.M.R	-	4.00	7.78	11.79	19.18
E.M.T	16.44	16.00	20.52	36.39	135.60
E.M.T.A	8.46	12.00	12.74	-	8.23
E.M.T.P	-	-	-	8.87	30.66
	24.90	32.00	41.05	57.05	193.67
Relief Full-Time Equivalents (FTE's)					
E.M.R	-	0.80	1.56	2.37	3.85
E.M.T	3.30	3.21	4.12	7.31	27.24
E.M.T.A	1.70	2.41	2.56	-	1.65
E.M.T.P	-	-	-	1.78	6.16
	5.00	6.43	8.25	11.46	38.90

Saskatchewan Emergency Medical Services (EMS) Development Project

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Summary of Key Operating and Cost Statistics (All Calls)

	Estevan	North Battleford	Northwest	Prince Albert	Regina
Regular and Relief Full-Time Equivalents (FTE's)					
E.M.R	-	4.80	9.34	14.16	23.03
E.M.T	19.75	19.21	24.65	43.69	162.84
E.M.T.A	10.16	14.41	15.30	-	9.89
E.M.T.P	-	-	-	10.65	36.82
	29.91	38.43	49.29	68.51	232.57
ADMINISTRATIVE PERSONNEL (FTE'S)					
Director	-	1.00	-	1.00	1.00
Finance Director	-	-	-	-	-
Billing/Collection Manager	-	1.00	-	1.00	1.00
Billing & Collection Clerical	3.00	3.00	3.00	3.00	3.00
Admin Asst.	1.00	1.00	1.00	1.00	1.00
Admin Support	-	-	-	-	-
Community Support	-	-	-	-	-
Quality/Training Officer	1.50	2.00	2.00	2.00	2.00
MIS Coordinator	-	-	-	-	-
MIS Staff	-	-	-	-	-
	5.50	8.00	6.00	8.00	8.00
OPERATIONS PERSONNEL (FTE'S)					
Operations Manager	1.00	1.00	1.00	1.00	1.00
Maintenance Manager	-	-	-	-	-
Logistics Manager	-	-	-	-	-
Maintenance Staff	-	0.50	-	0.50	1.00
Logistics/Service Technicians	-	-	-	-	-
Field Supervisor	-	4.00	-	4.00	8.00
	1.00	5.50	1.00	5.50	10.00
TOTAL FULL-TIME EQUIVALENTS (FTE'S)	36.41	51.93	56.29	82.01	250.57
AVERAGE SALARY *(including premium pays, overtime, call-back, standby, etc.)*	$37,178	$38,015	$35,277	$36,352	$37,024
TOTAL SALARIES *(including premium pays, overtime, call-back, standby, etc.)*	$1,353,560	$1,974,059	$1,985,837	$2,981,124	$9,276,986
EMPLOYEE BENEFITS (@ 17% OF SALARIES)	$230,105	$335,590	$337,592	$506,791	$1,577,088
SALARIES AND EMPLOYEE BENEFITS	$1,583,665	$2,309,649	$2,323,429	$3,487,915	$10,854,074
NON-SALARY EXPENSES	$382,713	$442,220	$577,176	$852,235	$3,735,968
CAPITAL REPLACEMENT					
(Note: Purchased discounted @ 8% per annum).					
On-Board Equipment	$210,838	$210,838	$267,905	$374,128	$1,311,794
Vehicles and Maintenance	$138,502	$138,502	$181,330	$255,591	$885,238
Communications	$23,055	$23,055	$32,247	$42,778	$144,991
Office Billing Furniture	$20,134	$22,638	$33,556	$42,772	$137,531
	$392,529	$395,034	$515,038	$715,269	$2,479,554

Saskatchewan Emergency Medical Services (EMS) Development Project

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Summary of Key Operating and Cost Statistics (All Calls)

	Estevan	North Battleford	Northwest	Prince Albert	Regina
RETURN ON WORKING CAPITAL (@ 8%) **(Note: Based on 30 days' of working capital)**	$12,965	$18,144	$19,125	$28,616	$96,198
TOTAL OPERATING EXPENSES	$2,371,872	$3,165,047	$3,434,767	$5,084,035	$17,165,795
ONE-TIME CAPITAL COSTS	$1,387,331	$1,397,331	$1,825,502	$2,533,756	$8,766,513

Saskatchewan Emergency Medical Services (EMS) Development Project

Attachment K

Summary of Key Operating and Cost Statistics (All Calls)

	Saskatoon	Swift Current	Yorkton	TOTAL
KEY OPERATING STATISTICS				
Those that Directly Impact Cost Calculation				
Annual (emergent and non-emergent) calls	24,493.33	2,084.00	4,034.00	70,997.00
Unit-hrs. used	46,382.78	5,608.57	9,387.47	132,153.92
Unit-hrs. required	228,176.00	38,012.00	51,584.00	698,516.00
Field staff mix:				
E.M.R	23.74%	11.19%	-	n/a
E.M.T	59.23%	72.37%	83.55%	n/a
E.M.T.A	5.65%	16.44%	16.45%	n/a
E.M.T.P	11.38%	-	-	n/a
Ambulances (including inventory @ 30%)	42	7	10	129
No. of Stations	25	4	5	76
Estimated kilometres per unit-hr used	44.7	52.1	40.8	45.1
Estimated kilometres	2,074,645	292,444	382,847	5,965,114
Those that Do Not Directly Impact Cost Calculation				
Average Pct. Time on Task (also referred to as Unit-hour Utilization (UhU))	20.33%	14.75%	18.20%	18.92%
Average Time-on-Task (hrs.)	1.89	2.69	2.33	1.86
Calls per Unit-Hour	0.1073	0.0548	0.0782	0.1016
Average annual kilometres per ambulance	49,396	41,778	38,285	46,241
Total (Ambulances and Supervisory) Vehicles	48	8	12	148
STAFFING AND ANNUAL OPERATING EXPENSES				
FIELD STAFF				
Regular Full-Time Equivalents (FTE's)				
E.M.R	49.60	3.89	-	96.25
E.M.T	123.77	25.19	39.47	413.38
E.M.T.A	11.80	5.72	7.77	66.73
E.M.T.P	23.78	-	-	63.30
	208.95	34.81	47.24	639.67
Relief Full-Time Equivalents (FTE's)				
E.M.R	9.96	0.78	-	19.33
E.M.T	24.86	5.06	7.93	83.04
E.M.T.A	2.37	1.15	1.56	13.41
E.M.T.P	4.78	-	-	12.72
	41.97	6.99	9.49	128.49

Saskatchewan Emergency Medical Services (EMS) Development Project

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Summary of Key Operating and Cost Statistics (All Calls)

	Saskatoon	Swift Current	Yorkton	TOTAL
Regular and Relief Full-Time Equivalents (FTE's)				
E.M.R	59.57	4.68	-	115.58
E.M.T	148.63	30.25	47.40	496.42
E.M.T.A	14.18	6.87	9.33	80.14
E.M.T.P	28.55	-	-	76.02
	250.93	41.80	56.73	768.16
ADMINISTRATIVE PERSONNEL (FTE'S)				
Director	1.00	1.00	1.00	6.00
Finance Director	-	-	-	-
Billing/Collection Manager	1.00	1.00	1.00	6.00
Billing & Collection Clerical	3.00	3.00	3.00	24.00
Admin Asst.	1.00	1.00	1.00	8.00
Admin Support	-	-	-	-
Community Support	-	-	-	-
Quality Training Officer	2.00	2.00	2.00	15.50
MIS Coordinator	-	-	-	-
MIS Staff	-	-	-	-
	8.00	8.00	8.00	59.50
OPERATIONS PERSONNEL (FTE'S)				-
Operations Manager	1.00	1.00	1.00	8.00
Maintenance Manager	-	-	-	-
Logistics Manager	-	-	-	-
Maintenance Staff	0.50	0.50	0.50	3.50
Logistics Service Technicians	-	-	-	-
Field Supervisor	4.00	4.00	4.00	28.00
	5.50	5.50	5.50	39.50
TOTAL FULL-TIME EQUIVALENTS (FTE'S)	264.43	55.30	70.23	867.16
AVERAGE SALARY *(including premium pays, overtime, call-back, standby, etc.)*	$34,875	$37,326	$37,956	$36,352
TOTAL SALARIES *(including premium pays, overtime, call-back, standby, etc.)*	$9,221,877	$2,064,218	$2,665,509	$31,523,171
EMPLOYEE BENEFITS (@ 17% OF SALARIES)	$1,567,719	$350,917	$453,137	$5,358,939
SALARIES AND EMPLOYEE BENEFITS	$10,789,596	$2,415,135	$3,118,646	$36,882,110
NON-SALARY EXPENSES	$3,772,462	$507,047	$705,143	$10,974,964
CAPITAL REPLACEMENT (Note: **Purchased discounted @ 8% per annum**).				
On-Board Equipment	$1,416,410	$240,175	$344,791	$4,376,880
Vehicles and Maintenance	$959,499	$159,916	$234,177	$2,952,756
Communications	$159,881	$27,839	$37,995	$491,839
Office Billing Furniture	$155,160	$26,845	$33,556	$472,191
	$2,690,949	$454,775	$650,518	$8,293,666

Saskatchewan Emergency Medical Services (EMS) Development Project

Attachment K

Summary of Key Operating and Cost Statistics (All Calls)

	Saskatoon	Swift Current	Yorkton	TOTAL
RETURN ON WORKING CAPITAL (@ 8%) **(Note: Based on 30 days' of working capital)**	$96,014	$19,267	$25,212	$315,541
TOTAL OPERATING EXPENSES	$17,349,021	$3,396,225	$4,499,518	$56,466,281
ONE-TIME CAPITAL COSTS	$9,522,590	$1,609,505	$2,301,582	$29,344,110

Saskatchewan Emergency Medical Services (EMS) Development Project

Attachment K

Summary of Key Operating and Cost Statistics (All Calls)

KEY OPERATING STATISTICS

	Regina	Saskatoon	TOTAL
Those that Directly Impact Cost Calculation			
Annual (emergent and non-emergent) calls	36,395.00	34,602.00	70,997.00
Unit-hrs. used	65,322.54	66,831.38	132,153.92
Unit-hrs. required	326,612.00	366,912.00	693,524.00
Field staff mix:			
E.M.R	7.67%	21.58%	n/a
E.M.T	72.09%	58.01%	n/a
E.M.T.A	10.04%	10.78%	n/a
E.M.T.P	10.20%	9.63%	n/a
Ambulances (including inventory @ 30%)	59	64	123
No. of Stations	35	41	76
Estimated kilometres per unit-hr used	44.0	46.3	45.1
Estimated kilometres	2,873,169	3,091,945	5,965,114
Those that Do Not Directly Impact Cost Calculation			
Average Pct. Time on Task (also referred to as Unit-hour Utilization (UhU))	20.00%	18.21%	19.06%
Average Time-on-Task (hrs.)	1.79	1.93	1.86
Calls per Unit-Hour	0.1114	0.0943	0.1024
Average annual kilometres per ambulance	48,698	48,312	48,497
Total (Ambulances and Supervisory) Vehicles	67	72	139

STAFFING AND ANNUAL OPERATING EXPENSES

FIELD STAFF			
Regular Full-Time Equivalents (FTE's)			
E.M.R	22.95	72.52	95.47
E.M.T	215.61	194.91	410.52
E.M.T.A	30.03	36.22	66.25
E.M.T.P	30.50	32.35	62.86
	299.10	336.00	635.10
Relief Full-Time Equivalents (FTE's)			
E.M.R	4.61	14.57	19.18
E.M.T	43.31	39.15	82.46
E.M.T.A	6.03	7.28	13.31
E.M.T.P	6.13	6.50	12.63
	60.08	67.49	127.57

Saskatchewan Emergency Medical Services (EMS) Development Project

Attachment K

Summary of Key Operating and Cost Statistics (All Calls)

	Regina	Saskatoon	TOTAL
Regular and Relief Full-Time Equivalents (FTE's)			
E.M.R	27.56	87.09	114.65
E.M.T	258.92	234.06	492.98
E.M.T.A	36.07	43.49	79.56
E.M.T.P	36.63	38.85	75.48
	359.18	403.49	762.67
ADMINISTRATIVE PERSONNEL (FTE'S)			
Director	1.00	1.00	2.00
Finance Director	-	-	-
Billing Collection Manager	1.00	1.00	2.00
Billing & Collection Clerical	6.00	6.00	12.00
Admin Asst.	2.00	2.00	4.00
Admin Support	-	-	-
Community Support	-	-	-
Quality Training Officer	4.00	4.00	8.00
MIS Coordinator	-	-	-
MIS Staff	-	-	-
	14.00	14.00	28.00
OPERATIONS PERSONNEL (FTE'S)			-
Operations Manager	2.00	2.00	4.00
Maintenance Manager	-	-	-
Logistics Manager	-	-	-
Maintenance Staff	2.00	1.50	3.50
Logistics Service Technicians	-	-	-
Field Supervisor	16.00	12.00	28.00
	20.00	15.50	35.50
TOTAL FULL-TIME EQUIVALENTS (FTE'S)	393.18	432.99	826.17
AVERAGE SALARY *(including premium pays, overtime, call-back, standby, etc.)*	$37,277	$35,478	$36,334
TOTAL SALARIES *(including premium pays, overtime, call-back, standby, etc.)*	$14,656,215	$15,361,856	$30,018,071
EMPLOYEE BENEFITS (@ 17% OF SALARIES)	$2,491,557	$2,611,515	$5,103,072
SALARIES AND EMPLOYEE BENEFITS	$17,147,771	$17,973,371	$35,121,143
NON-SALARY EXPENSES	$5,330,871	$5,644,092	$10,974,964
CAPITAL REPLACEMENT			
(Note: Purchased discounted @ 8% per annum).			
On-Board Equipment	$1,981,556	$2,143,238	$4,124,794
Vehicles and Maintenance	$1,343,574	$1,450,644	$2,794,217
Communications	$224,424	$248,506	$472,930
Office Billing Furniture	$218,065	$254,126	$472,191
	$3,767,619	$4,096,513	$7,864,132

Saskatchewan Emergency Medical Services (EMS) Development Project

Attachment K

Summary of Key Operating and Cost Statistics (All Calls)

	Regina	Saskatoon	TOTAL
RETURN ON WORKING CAPITAL (@ 8%) **(Note: Based on 30 days' of working capital)**	$148,211	$155,720	$303,930
TOTAL OPERATING EXPENSES	$26,394,472	$27,869,696	$54,264,169
ONE-TIME CAPITAL COSTS	$13,331,768	$14,506,016	$27,837,784

Saskatchewan Emergency Medical Services (EMS) Development Project

Attachment K

Summary of Key Operating and Cost Statistics (All Calls)

ONE ZONE

KEY OPERATING STATISTICS

Those that Directly Impact Cost Calculation	
Annual (emergent and non-emergent) calls	70,997.00
Unit-hrs. used	132,153.92
Unit-hrs. required	691,184.00
Field staff mix:	
E.M.R	15.03%
E.M.T	64.64%
E.M.T.A	10.43%
E.M.T.P	9.90%
Ambulances (including inventory @ 30%)	119
No. of Stations	76
Estimated kilometres per unit-hr used	45.1
Estimated kilometres	5,965,114

Those that Do Not Directly Impact Cost Calculation	
Average Pct. Time on Task (also referred to as Unit-hour Utilization (UhU))	19.12%
Average Time-on-Task (hrs.)	1.86
Calls per Unit-Hour	0.1027
Average annual kilometres per ambulance	50,127
Total (Ambulances and Supervisory) Vehicles	134

STAFFING AND ANNUAL OPERATING EXPENSES

FIELD STAFF

Regular Full-Time Equivalents (FTE's)	
E.M.R	95.15
E.M.T	409.13
E.M.T.A	66.03
E.M.T.P	62.64
	632.95

Relief Full-Time Equivalents (FTE's)	
E.M.R	19.11
E.M.T	82.18
E.M.T.A	13.26
E.M.T.P	12.58
	127.14

Saskatchewan Emergency Medical Services (EMS) Development Project

Attachment K

Summary of Key Operating and Cost Statistics (All Calls)

	ONE ZONE
Regular and Relief Full-Time Equivalents (FTE's)	
E.M.R	114.26
E.M.T	491.31
E.M.T.A	79.29
E.M.T.P	75.23
	760.10
ADMINISTRATIVE PERSONNEL (FTE'S)	
Director	1.00
Finance Director	-
Billing/Collection Manager	1.00
Billing & Collection Clerical	10.00
Admin Asst.	4.00
Admin Support	-
Community Support	-
Quality Training Officer	6.00
MIS Coordinator	-
MIS Staff	-
	22.00
OPERATIONS PERSONNEL (FTE'S)	
Operations Manager	4.00
Maintenance Manager	-
Logistics Manager	-
Maintenance Staff	3.50
Logistics Service Technicians	-
Field Supervisor	26.00
	33.50
TOTAL FULL-TIME EQUIVALENTS (FTE'S)	815.60
AVERAGE SALARY	
(including premium pays, overtime, call-back, standby, etc.)	$36,388
TOTAL SALARIES	
(including premium pays, overtime, call-back, standby, etc.)	$29,677,733
EMPLOYEE BENEFITS (@ 17% OF SALARIES)	$5,045,215
SALARIES AND EMPLOYEE BENEFITS	$34,722,947
NON-SALARY EXPENSES	$10,974,964
CAPITAL REPLACEMENT	
(Note: Purchased discounted @ 8% per annum).	
On-Board Equipment	$3,990,842
Vehicles and Maintenance	$2,698,543
Communications	$462,724
Office Billing Furniture	$472,191
	$7,624,299

Saskatchewan Emergency Medical Services (EMS) Development Project

Attachment K

Summary of Key Operating and Cost Statistics (All Calls)

	ONE ZONE
RETURN ON WORKING CAPITAL (@ 8%) **(Note: Based on 30 days' of working capital)**	$301,305
TOTAL OPERATING EXPENSES	$53,623,515
ONE-TIME CAPITAL COSTS	$26,997,533

Saskatchewan Emergency Medical Services (EHS) Development Project

Attachment L

Determination of Field Staff Mix

67 Sites, sorted by
(a) Unit-hrs. required, then (b) Unit-hrs. used

Site	Unit-hrs. required	Unit-hrs. used	Unit-hrs. required (Cumul. Pct.)	
Saskatoon	58,032	30,408.71	7.98%	EMT-P
Regina	53,352	26,676.33	15.33%	EMT-P
Prince Albert	19,708	5,490.22	18.04%	EMT
Moose Jaw	18,824	4,389.74	20.63%	EMT
Yorkton	17,524	5,477.34	23.04%	
North Battleford	17,472	3,252.52	25.44%	
Swift Current	12,844	3,012.14	27.21%	
St. Walburg	11,180	2,442.28	28.75%	
Carlyle	9,776	2,209.27	30.09%	
Elfros	9,516	2,012.81	31.40%	
Tisdale	9,204	1,592.93	32.67%	EMT-A
Weyburn	8,840	1,232.12	33.88%	EMT-A
Nipawin	8,788	1,269.76	35.09%	EMT
Estevan	8,736	1,572.90	36.30%	EMT
Meadow Lake	8,736	1,460.63	37.50%	EMT
Unity	8,736	1,458.26	38.70%	EMT
Melfort	8,736	1,402.49	39.90%	EMT
Lloydminster	8,736	1,359.30	41.10%	EMT
Preeceville	8,736	1,197.09	42.31%	
Assiniboia	8,736	1,197.03	43.51%	
Maple Creek	8,736	1,154.93	44.71%	
Kelvington	8,736	1,112.85	45.91%	
Kamsack	8,736	1,077.19	47.11%	
Spiritwood	8,736	987.51	48.32%	
Moosomin	8,736	950.99	49.52%	
Bengough	8,736	934.28	50.72%	
Shaunavon	8,736	925.37	51.92%	
Kindersley	8,736	908.69	53.12%	
Canora	8,736	907.35	54.32%	
Humboldt	8,736	883.39	55.53%	EMT
Punnichy	8,736	872.24	56.73%	EMT
Rosetown	8,736	872.02	57.93%	
Esterhazy	8,736	854.99	59.13%	
Indian Head	8,736	850.82	60.33%	
Fort Qu'Appelle	8,736	844.37	61.54%	
Broadview	8,736	839.91	62.74%	
Leross	8,736	834.79	63.94%	
Carrot River	8,736	833.63	65.14%	
Fillmore	8,736	815.56	66.34%	
Blaine Lake	8,736	789.91	67.55%	
Oxbow	8,736	766.36	68.75%	
Melville	8,736	728.51	69.95%	

Saskatchewan Emergency Medical Services (EHS) Development Project

Attachment L

Determination of Field Staff Mix

67 Sites, sorted by
(a) Unit-hrs. required, then (b) Unit-hrs. used

Site	Unit-hrs. required	Unit-hrs. used	Unit-hrs. required (Cumul. Pct.)	
Kerrobert	8,736	715.86	71.15%	EMT-R
Shellbrook	8,736	702.19	72.35%	EMT
Watson	8,736	692.86	73.56%	
Leader	8,736	678.68	74.76%	
Strasbourg	8,736	672.62	75.96%	
Loon Lake	8,736	645.33	77.16%	
Canwood	8,736	631.91	78.36%	
Gravelbourg	8,736	588.03	79.57%	
Kipling	8,736	585.63	80.77%	
Outlook	8,736	578.96	81.97%	
Central Butte	8,736	565.63	83.17%	
Watrous	8,736	564.11	84.37%	
Davidson	8,736	548.95	85.58%	
Biggar	8,736	539.60	86.78%	
Eston	8,736	536.06	87.98%	
Ponteix	8,736	516.13	89.18%	
Rosthern	8,736	467.07	90.38%	
Big River	8,736	454.32	91.59%	
Wakaw	8,736	435.89	92.79%	
Maidstone	8,736	425.53	93.99%	
Hudson Bay	8,736	416.74	95.19%	
Porcupine Plain	8,736	357.90	96.39%	
Cut Knife	8,736	348.70	97.60%	
Cupar	8,736	337.36	98.80%	
Whitewood	8,736	288.34	100.00%	
	726,804	132,153.92		

Saskatchewan Emergency Medical Services (EMS) Development Project

Attachment M

Salary Costing -- Field Staff

COST PER
FULL-TIME EQUIVALENT (FTE):

NOTE: 1 FTE = 2,184 hours per year.

Effective April 1,2000 - HSAS

	Regular Hourly Rate of Pay							Annual Salary Costs (including premium pay) per Regular FTE			Annual Salary Costs (including premium pay) per Relief FTE				
	Step 1	Step 2	Step 3	Step 4	Step 5	Step 6	Step 5	Straight Time based on 1560 hours/yr x 8.4 hrs/day (A)	Estimated Overtime, Standby, and On-Call Costs (B) = A x 10%	Total Annual Salary Costs (including premium pay) (C) = A + B	Straight Time based on 1560 hours/yr x 8.4 hrs/day (A)	Additional 1/2 time premium paid to relief on stat. Holidays (B)	Sub-Total (C) = A + B	Estimated Overtime, Standby, and On-Call Costs (D) = C x 10%	Total Annual Salary Costs (including premium pay) (E) = C + D
E.M.R (Note 1)	n/a	n/a	n/a	n/a	n/a	n/a	$10.000	$21,840	$2,184	$24,024	$21,840	$462	$22,302	$2,230	$24,532
E.M.T.	$11.784	$12.505	$13.249	$14.045	$14.886	$15.779	$14.886	$32,511	$3,251	$35,762	$32,511	$688	$33,199	$3,320	$36,519
E.M.D.	$12.538	$13.293	$14.089	$14.929	$15.823	$16.771	$15.823	$34,557	$3,456	$38,013	$34,557	$731	$35,288	$3,529	$38,817
E.M.T.A.	$13.199	$14.006	$14.838	$15.731	$16.671	$17.674	$16.671	$36,409	$3,641	$40,050	$36,409	$770	$37,180	$3,718	$40,898
E.M.T.P.	$14.875	$15.769	$16.717	$17.719	$18.774	$19.905	$18.774	$41,002	$4,100	$45,103	$41,002	$867	$41,870	$4,187	$46,057
RN Attendant	$20.510	$21.530	$22.070	$22.600	$23.170	$24.330	$23.170	$50,603	$5,060	$55,664	$50,603	$1,070	$51,674	$5,167	$56,841

NOTE 1 $10.00 per hour reasonable based on industry average for this non unionized position (ie: EMR)

Saskatchewan Emergency Medical Services (EMS) Development Project

Attachment N

Field Staff Relief

Relief Calculation:

	Relief Required for Regular Staff (days)	Relief Required for Relief Staff (days)	Total Relief Required (days)	
Vacation	20.00	3.01	23.01	
Statutory Holidays	11.00	2.21	13.21	
Sick leave	10.00	-	10.00	
Other (e.g. backfill for employee training)	5.00	1.00	6.00	
	46.00	6.23	52.23	(A)
No. of working days per year			260.00	(B)
			20.09%	(C) = (A/B)

Emergency Medical Services (EMS) Development Project

Attachment O

Staffing Requirements and Costing - Administrative and Operations Personnel (excluding Field & Communications Staff)

Administrative Personnel	67 Core Coverage Areas (< 1,200 calls per year)		67 Core Coverage Areas (> 1,200 calls per year)		20 Shared Coverage Areas Lesser of Sum of Staffing for Individual Sites and:		8 Patient Flow Zones Lesser of Sum of Staffing for Individual Sites and:		2 Patient Flow Zones Lesser of Sum of Staffing for Individual Sites and:		1 Patient Flow Zone Lesser of Sum of Staffing for Individual Sites and:	
Position	FTEs	Annual Wage	FTEs	Annual Wage	FTEs	Annual Wage	FTEs	Annual Wage	FTEs	Annual Wage	FTEs	Annual Wage
Director			1.0	$60,000	1.0	$65,000	1.0	$70,000	1.0	$75,000	1.0	$95,000
Finance Director					1.0	$60,000	1.0	$65,000	1.0	$68,000	1.0	$80,000
Billing/Collection Manager			1.0	$31,000	1.0	$33,000	1.0	$34,000	1.0	$37,000	1.0	$44,000
Billing & Collection Clerical	1.0	$25,000	1.0	$25,000	2.0	$25,000	3.0	$25,000	6.0	$25,000	10.0	$25,000
Admin Asst	0.5	$30,000	1.0	$30,000	1.0	$30,000	1.0	$30,000	2.0	$30,000	4.0	$30,000
Admin Support							1.0	$27,000	2.0	$27,000	4.0	$27,000
Community Support							1.0	$42,000	2.0	$42,000	4.0	$45,000
Quality/Training Officer	0.5	$45,000	1.0	$45,000	1.0	$47,000	2.0	$49,000	4.0	$50,000	6.0	$52,000
MIS Coordinator					1.0	$45,000	1.0	$47,000	1.0	$48,000	1.0	$50,000
MIS Staff							1.0	$36,000	2.0	$36,000	4.0	$36,000

Operations Personnel	67 Core Coverage Areas (< 1,200 calls per year)		67 Core Coverage Areas (> 1,200 calls per year)		20 Shared Coverage Areas Lesser of Sum of Staffing for Individual Sites and:		8 Patient Flow Zones Lesser of Sum of Staffing for Individual Sites and:		2 Patient Flow Zones Lesser of Sum of Staffing for Individual Sites and:		1 Patient Flow Zone Lesser of Sum of Staffing for Individual Sites and:	
Position	FTEs	Annual Wage	FTEs	Annual Wage	FTEs	Annual Wage	FTEs	Annual Wage	FTEs	Annual Wage	FTEs	Annual Wage
Operations Manager	1.0	$47,000	1.0	$52,000	1.0	$55,000	1.0	$58,000	2.0	$62,000	4.0	$70,000
Maintenance Manager					1.0	$43,000	1.0	$45,000	1.0	$48,000	2.0	$53,000
Logistics Manager					1.0	$35,000	1.0	$38,000	2.0	$40,000	4.0	$40,000
Maintenance Staff			0.5	$33,000	1.0	$33,000	3.0	$33,000	5.0	$33,000	7.0	$33,000
Logistics/Service Technicians					4.0	$25,000	6.0	$25,000	8.0	$25,000	12.0	$25,000
Field Supervisor			4.0	$47,000	5.0	$49,000	10.0	$52,000	18.0	$55,000	26.0	$57,000

NOTE: Field Staff (to be calculated based on unit-hour requirements)

NOTE: Communications Centre Staff (to be calculated costed as part of Centralized Dispatch)

Saskatchewan Emergency Medical Services (EMS) Development Project

Attachment P

Employee Benefits

Employee Benefits Calculation:

(Based on estimated staffing for a small ambulance operation with minimum 24/7 coverage)

	Pct. Of Salaries
Canada Pension Plan	3.34%
Pension Plan	4.54%
Disability Insurance Plan	0.44%
Employment Insurance	3.27%
Workers Compensation	2.49%
Group Life	0.05%
Dental Plan	0.78%
Extended Health Enhanced Dental	2.10%
Total Employee Benefits	17.00%

Saskatchewan Emergency Medical Services (EMS) Development Project

Attachment Q

Non-Salary Expenses -- Multiple Linear Regression Analysis

COST AND COST DRIVER DATA

	Independent Variables (ie. Cost Drivers)		Dependent Variable (ie. Variable to be predicted)
Existing Provider	Kilometers	Calls	Actual Non- Salary Expenses (1997-98)
Service 1	369,629	15,900	$848,577
Service 2	182,738	1,440	$155,363
Service 3	79,198	450	$110,260
Service 4	129,769	3,564	$318,795
Service 5	131,697	905	$100,727
Service 6	51,329	255	$51,965
Service 7	166,624	2,111	$330,208
Service 8	104,165	738	$297,698
Service 9	77,947	477	$70,924
Service 10	36,230	269	$50,122
Service 11	48,601	516	$57,641
Service 12	49,672	610	$49,954
Service 13	11,706	816	$134,591
Service 14	212,977	2,073	$349,939
Service 15	101,608	507	$143,253
Service 16	23,000	150	$44,335
Service 17	101,588	794	$161,939
Service 18	146,799	847	$186,250
Service 19	51,063	283	$66,797
Service 20	10,747	159	$22,367
Service 21	40,363	168	$16,210
Service 22	43,541	224	$47,280
Service 23	96,737	625	$81,500
Service 24	53,358	258	$140,777
Service 25	17,964	131	$57,376
Service 26	131,918	876	$123,344
Service 27	28,491	410	$96,191
Service 28	245,433	4,635	$409,608
			$4,523,991

COMPARISON OF PREDICTED AND ACTUAL NON-SALARY COSTS (1997-98)

Existing Provider	Predicted Non-Salary Expenses (1997-98)	Actual Non-Salary Expenses (1997-98)
Service 1	$874,561	$848,577
Service 2	$240,500	$155,363
Service 3	$112,691	$110,260
Service 4	$258,839	$318,795
Service 5	$176,000	$100,727
Service 6	$80,564	$51,965
Service 7	$246,870	$330,208
Service 8	$145,078	$297,698
Service 9	$112,387	$70,924
Service 10	$66,967	$50,122
Service 11	$86,334	$57,641
Service 12	$90,322	$49,954
Service 13	$61,568	$134,591
Service 14	$288,772	$349,939
Service 15	$135,348	$143,253
Service 16	$50,874	$44,335
Service 17	$144,464	$161,939
Service 18	$188,200	$186,250
Service 19	$81,208	$66,797
Service 20	$39,765	$22,367
Service 21	$67,596	$16,210
Service 22	$72,334	$47,280
Service 23	$134,573	$81,500
Service 24	$82,547	$140,777
Service 25	$45,586	$57,376
Service 26	$175,283	$123,344
Service 27	$64,257	$96,191
Service 28	$400,503	$409,608
	$4,523,991	$4,523,991

SUMMARY OUTPUT

Regression Statistics	
Multiple R	95.1510%
R Square	90.5371%
Adjusted R Square	89.7801%
Standard Error	55,178.10
Observations	28

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	2	728,244,550,399.05	364,122,275,200	119.60	0.00000000
Residual	25	76,115,574,669.63	3,044,622,987		
Total	27	804,360,125,068.68			

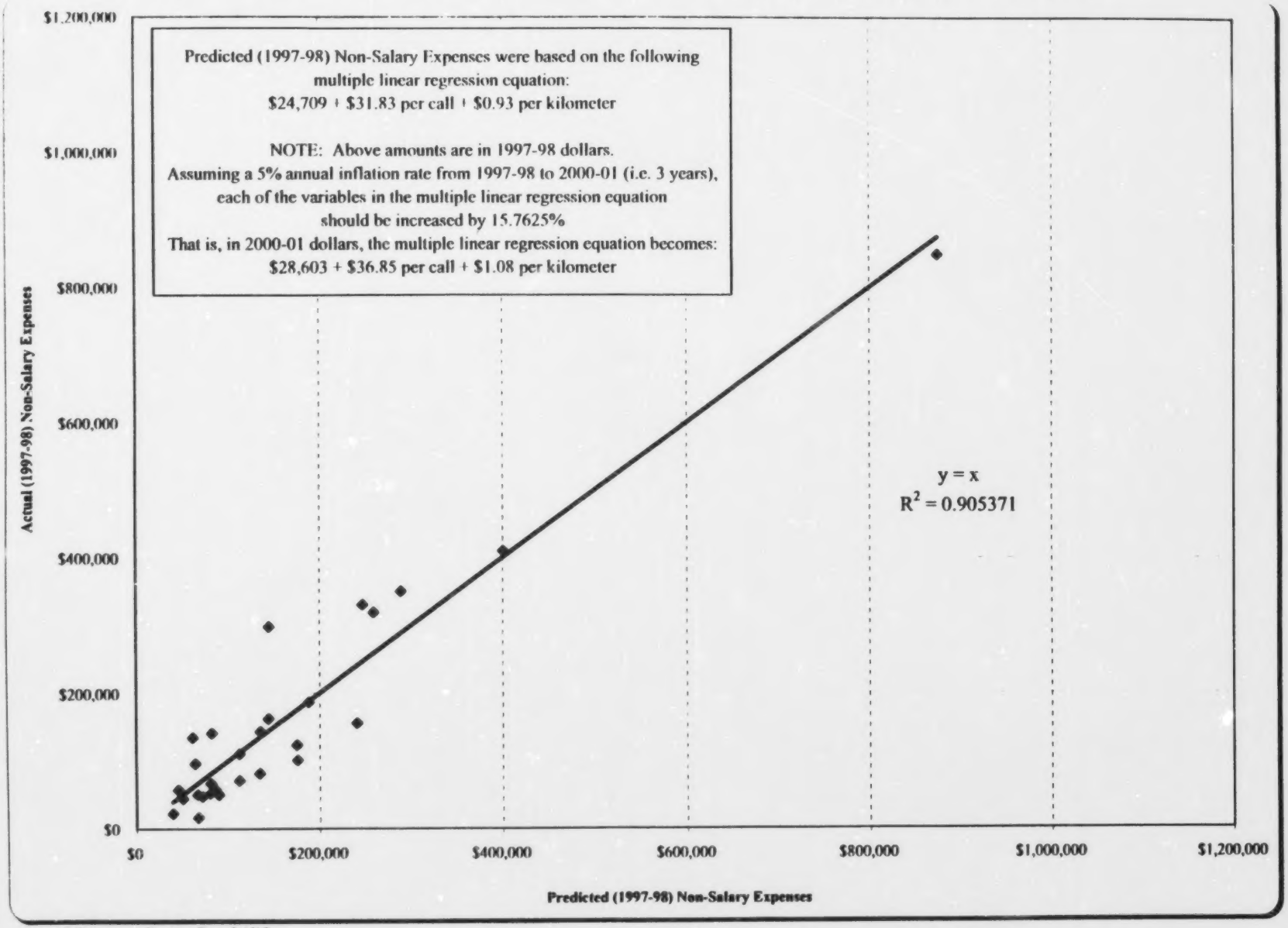
	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*
Intercept	$24,708.54	$18,905.86	1.306925223	0.203132622	($14,228.77)	$63,645.86
Kilometers	$0.93	$0.23	4.128587592	0.000355879	$0.47	$1.39
Calls	$31.83	$6.09	5.225039561	2.08422E-05	$19.28	$44.37

Convert 1997-98 dollars to 2000-01 dollars, based on a compounding average annual inflation rate of 5.0%

Intercept	$28,693
Kilometers	$1.08
Calls	$36.85

Saskatchewan Emergency Medical Services (EMS) Development Project

Attachment R: Non-Salary Expenses -- Results of Multiple Linear Regression Analysis


Predicted (1997-98) Non-Salary Expenses were based on the following multiple linear regression equation:
$24,709 + $31.83 per call + $0.93 per kilometer
NOTE: Above amounts are in 1997-98 dollars.
Assuming a 5% annual inflation rate from 1997-98 to 2000-01 (i.e. 3 years), each of the variables in the multiple linear regression equation should be increased by 15.7625%
That is, in 2000-01 dollars, the multiple linear regression equation becomes:
$28,603 + $36.85 per call + $1.08 per kilometer
y = x
R² = 0.905371
Actual (1997-98) Non-Salary Expenses
Predicted (1997-98) Non-Salary Expenses
$0
$200,000
$400,000
$600,000
$800,000
$1,000,000
$1,200,000

Acute & Emergency Services Branch / KO
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Graph of Non Salary Regression Project Documentation.xls

Saskatchewan Emergency Medical Services (EMS) Development Project

Attachment S

Line-by-Line Non-Salary Template

NON-SALARY ITEMS	Cost	Unit of measurement (ie. Primary 'cost driver')
Audit, Legal, Professional Services, Accounting	$2.00	per call
Office Expense - includes supplies, information technology & office equipment purchase/maintenance/leases, postage, courier	$4.75	per call
Medical Supplies - includes pharmacy, oxygen, sanitary & safety	$6.48	per call
Laundry & Uniforms	$3.00	per call
Vehicles - Insurance (incl. Registration, licenses & malpractice)	$1,800	per vehicle
Property Insurance & Taxes	$2.25	per call
Vehicles - Gas & Oil	$0.38	per kilometre
Vehicles - Maintenance	$0.40	per kilometre
Radio Telephone Utilities	$8.50	per call
Facility - Maintenance & Rent	5.00%	of total budget (excl. non-salary and depreciation)
Marketing & Advertising, Education, Recruiting, Training, Education, Tuition	$5.00	per call
Association Dues & Subscriptions	$1.25	per call
Service Bank Charges	$0.80	per call
Administrative - Misc. (includes purchased services; small tools, donations, employee assistance programs)	$1.70	per call
Travel - Administrative Staff	$2.55	per call

SUMMARY	
Cost	Unit of measurement (ie. Primary 'cost driver')
$38.28	per call
$1,800	per vehicle
$0.78	per kilometre
5.00%	of total budget (excl. non-salary and depreciation)

Saskatchewan Emergency Medical Services (EMS) Development Project

Attachment T

Schedule of Capital Equipment Requirements

Descpription	Type of Capital Asset	Quantity Required (NOTE: 'Per ambulance' is to be read as 'Per total no. of active and inventoried ambulance units')	Pct. Inventoried	Useful Life (Years)	Replacement Cost/Unit ($ Canadian)
K.E.D. Boards	On-Board Equipment	2 per ambulance	125%	3	$205
Resuscitator	On-Board Equipment	2 per ambulance	125%	4	$615
Drug Boxes	On-Board Equipment	1 per ambulance	125%	4	$469
Trauma Bags	On-Board Equipment	1 per ambulance	125%	4	$365
Pediatric Packs	On-Board Equipment	1 per ambulance	125%	4	$179
Airway Bags	On-Board Equipment	1 per ambulance	125%	2	$278
Intubation Kit (bag)	On-Board Equipment	1 per ambulance	125%	2	$100
Splint Kit - (adult & pediatrics)	On-Board Equipment	1 per ambulance	125%	2	$519
Back Boards	On-Board Equipment	6 per ambulance	150%	3	$219
Back Boards - Child	On-Board Equipment	2 per ambulance	125%	3	$389
Portable Suction	On-Board Equipment	1 per ambulance	150%	4	$795
Peds Packs	On-Board Equipment	1 per ambulance	125%	4	$179
Sager Traction Splint	On-Board Equipment	2 per ambulance	125%	4	$499
Primary Stretcher	On-Board Equipment	1 per ambulance	125%	4	$4,799
Stair Chair	On-Board Equipment	1 per ambulance	125%	4	$1,625
Reeves Stretcher	On-Board Equipment	1 per ambulance	125%	4	$831
Scoop Stretcher	On-Board Equipment	1 per ambulance	125%	4	$756
Pedi-Mates	On-Board Equipment	1 per ambulance	125%	4	$400
Laryngoscope Handles	On-Board Equipment	2 per ambulance	125%	4	$154
Laryngoscope Blades	On-Board Equipment	18 per ambulance	125%	4	$164
Oxygen Cylinders	On-Board Equipment	12 per ambulance	150%	4	$145
Life Pak Cables	On-Board Equipment	2 per ambulance	150%	1	$300
Adult B P Cuffs	On-Board Equipment	3 per ambulance	150%	1	$119
B P Cuff Kit	On-Board Equipment	1 per ambulance	125%	2	$282
B P Cuff Wall Mount	On-Board Equipment	1 per ambulance	125%	2	$152
Stethoscope, Adult	On-Board Equipment	5 per ambulance	150%	1	$85
Stethoscope, Ped.	On-Board Equipment	1 per ambulance	125%	2	$60
Pedi-Mates Car Seats	On-Board Equipment	1 per ambulance	125%	5	$395
Glucometer	On-Board Equipment	1 per ambulance	125%	5	$120
Thermometers	On-Board Equipment	1 per ambulance	125%	5	$250
Strap Kits	On-Board Equipment	4 per ambulance	125%	5	$82
Restraint	On-Board Equipment	10 per ambulance	125%	5	$82
O2 Flow Meter	On-Board Equipment	2 per ambulance	125%	5	$195
Life-Pak 12	On-Board Equipment	1 per ambulance	125%	5	$14,000
Life-Pak 12, 12 Lead Module	On-Board Equipment	1 per ambulance	125%	5	$10,000
Life-Pak 12 Battery	On-Board Equipment	4 per ambulance	125%	1	$150
Life-Pak 12 Battery Support System	On-Board Equipment	1 per ambulance	125%	5	$4,500
Pulseoximetery	On-Board Equipment	1 per ambulance	150%	4	$1,375
Thumper	On-Board Equipment	1 per ambulance	125%	4	$7,000
Rescue Tools	On-Board Equipment	1 per ambulance	125%	4	$3,000
New Technology	On-Board Equipment	1 per ambulance	125%	1	$2,000
Disposable Supply Pkg.	On-Board Equipment	1 per ambulance	125%	5	$3,500
Ventilator	On-Board Equipment	1 per ambulance	125%	5	$3,500
Pro Pac	On-Board Equipment	1 per ambulance	125%	5	$4,000
IV Pumps	On-Board Equipment	1 per ambulance	125%	5	$3,500

Saskatchewan Emergency Medical Services (EMS) Development Project

Attachment T

Schedule of Capital Equipment Requirements

Descpription	Type of Capital Asset	Quantity Required (NOTE: 'Per ambulance' is to be read as 'Per total no. of active and inventoried ambulance units')	Pct. Inventoried	Useful Life (Years)	Replacement Cost/Unit ($ Canadian)
Type 3 Vehicles	Vehicles and Maintenance	1 per ambulance	100%	5	$85,000
Staff Response Vehicles	Vehicles and Maintenance	0.1 per ambulance	125%	5	$40,000
Shop Equipment	Vehicles and Maintenance	1 per ambulance	100%	5	$500
Cellular Phones	Communications	1 per ambulance	125%	5	$400
Radio Hand Held	Communications	3 per ambulance	125%	5	$1,500
Radio Mobile	Communications	1 per ambulance	125%	5	$2,000
Alert Monitor	Communications	1 per ambulance	125%	5	$1,250
Printers - Color	Communications	1 per location	100%	5	$2,500
Phone Hardware	Communications	1 per location	100%	5	$1,000
Base Station Equip.	Communications	1 per location	100%	10	$10,000
Phone System	Office/Billing/Furniture	1 per location	100%	5	$7,500
Computer Network	Office/Billing/Furniture	1 per location	100%	3	$3,000
Work Stations	Office/Billing/Furniture	1 per station	100%	5	$3,000
Station Equipment	Office/Billing/Furniture	1 per station	100%	5	$7,000
Office Automation Equipment	Office/Billing/Furniture	1 per location	100%	3	$3,000

Saskatchewan Emergency Medical Services (EMS) Development Project

Attachment U

Summary of Recommended Phase-In of Full-time 24 / 7 Coverage

	Patient Flow Zone							
	Estevan	**North Battleford**	**Northwest**	**Prince Albert**	**Regina**	**Saskatoon**	**Swift Current**	**Yorkton**
Full-time 24 / 7 coverage is currently in place in 12 Core Coverage Areas (2000-01)	Estevan	North Battleford	Lloydminster Meadow Lake	Prince Albert	Regina Moose Jaw Weyburn	Saskatoon Nipawin	Swift Current	Yorkton
Full-time 24 / 7 coverage will not be added to any of the Core Coverage Areas in Year 1 (2001-02)								
Full-time 24 / 7 coverage will be added to 20 Core Coverage Areas in Year 2 (2002-03) **(NOTE: By the end of Year 2, all 20 Shared Coverage Areas will have full-time 24 / 7 coverage in *at least* one of its Core Coverage Areas)**	Carlyle	Unity	St. Walburg	Shellbrook Spiritwood	Whitewood Elfros Assiniboia Fort Qu'Appelle Punnichy	Melfort Tisdale Humboldt Kindersley Rosetown Kelvington	Maple Creek Shaunavon	Melville Canora
Full-time 24 /7 coverage will be added to 18 Core Coverage Areas in Year 3 (2003-04)	Oxbow			Blaine Lake	Indian Head Moosomin Kipling Strasbourg Gravelbourg Bengough	Outlook Rosthern Watrous Biggar Hudson Bay Leader Davidson Central Butte		Kamsack Preeceville
Full-time 24 / 7 coverage will be added to 17 Core Coverage Areas in Year 4 (2004-05)		Cut Knife	Loon Lake Maidstone	Big River Canwood	Esterhazy Fillmore Leross Cupar Broadview	Eston Watson Kerrobert Carrot River Wakaw Porcupine Plain	Ponteix	

NOTE: Core coverage areas are added based on the order produced by the diminishing return analysis.

Saskatchewan Emergency Medical Services (EMS) Development Project

Attachment V

Funding to Patient Flow Zones - Recommended Phase In

YEAR 1 - (A) PUT IN PLACE OVERSIGHT & CO-ORDINATION FUNCTIONS, (B) PUT IN PLACE ADMINISTRATIVE AND OPERATIONS PERSONNEL AND BEGIN TO ACHIEVE CO-ORDINATION AND EFFICIENCIES, (C) ENSURE COVERAGE IN EACH OF THE 67 CORE COVERAGE AREAS; (D) ADDRESS UNION WAGE ISSUES WITH EXISTING SITE ARRANGEMENTS (i.e. full-time vs. part-time)

	Estevan	North Battleford	Northwest	Prince Albert	Regina	Saskatoon	Swift Current	Yorkton	Northern Saskatchewan	CAPA	TOTAL
EXTERNAL OVERSIGHT AND CO-ORDINATION (A)	$170,190	$170,190	$170,190	$170,190	$256,770	$256,770	$170,190	$170,190			$1,534,680
PROGRAM DELIVERY COSTS (B)											
Field staff	$571,100	$939,994	$1,016,031	$1,179,988	$4,810,005	$4,093,258	$744,627	$1,038,261			$14,393,266
Administrative and Operations personnel	$276,705	$689,715	$305,370	$689,715	$952,380	$689,715	$689,715	$689,715			$4,983,030
Non-salary	$382,713	$442,220	$577,176	$852,235	$3,735,968	$3,772,462	$507,047	$705,143			$10,974,964
Cost of working capital	$8,113	$13,661	$12,518	$17,947	$62,627	$56,409	$12,800	$16,043			$200,118
Capital replacement	$392,529	$395,034	$515,038	$715,269	$2,479,554	$2,690,949	$454,775	$650,518			$8,293,666
Other									$4,251,428	$1,000,000	$5,251,428
Total - Program Delivery Costs	$1,631,161	$2,480,624	$2,426,133	$3,455,154	$12,040,535	$11,302,794	$2,408,965	$3,099,680	$4,251,428	$1,000,000	$44,096,472
ESTIMATED FUNDING AVAILABLE IN 2000-01											$33,303,979
CUMULATIVE EMS INCREASE (i.e. Increase over 2000-01)											$10,792,492
NO. OF CORE COVERAGE AREAS WITH FULL-TIME (24 / 7) SITES											
Current (October, 2000)	1	1	2	1	3	2	1	1			12
Full-time (24 / 7) Coverage added during Year 1 (i.e. 2001-02)	-	-	-	-	-	-	-	-			-
Full-time (24 / 7) Coverage at end of Year 1	1	1	2	1	3	2	1	1			12

Saskatchewan Emergency Medical Services (EMS) Development Project

Attachment V

Funding to Patient Flow Zones - Recommended Phase In

YEAR 2 - ADD FULL-TIME 24 / 7 COVERAGE TO 20 ADDITIONAL CORE COVERAGE AREAS.

NOTE: By end of Year 2, at least one Core Coverage Area in each of the 20 Shared Coverage Areas will have full-time 24 / 7 coverage.

	Estevan	North Battleford	Northwest	Prince Albert	Regina	Saskatoon	Swift Current	Yorkton	Northern Saskatchewan	CAPA	TOTAL
EXTERNAL OVERSIGHT AND CO-ORDINATION (A)	$170,190	$170,190	$170,190	$170,190	$256,770	$256,770	$170,190	$170,190			$1,534,680
PROGRAM DELIVERY COSTS (B)											
Field staff	$941,452	$1,296,201	$1,443,696	$1,847,872	$6,578,954	$6,263,891	$1,455,357	$1,732,055			$21,559,478
Administrative and Operations personnel	$276,705	$689,715	$305,370	$689,715	$952,380	$689,715	$689,715	$689,715			$4,983,030
Non-salary	$382,713	$442,220	$577,176	$852,235	$3,735,968	$3,772,462	$507,047	$705,143			$10,974,964
Cost of working capital	$10,555	$16,010	$15,338	$22,350	$74,290	$70,721	$17,486	$20,617			$247,368
Capital replacement	$392,529	$395,034	$515,038	$715,269	$2,479,554	$2,690,949	$454,775	$650,518			$8,293,666
Other									$4,251,428	$1,000,000	$5,251,428
Total - Program Delivery Costs	$2,003,954	$2,839,179	$2,856,617	$4,127,442	$13,821,146	$13,487,738	$3,124,381	$3,798,048	$4,251,428	$1,000,000	$51,309,933
ESTIMATED FUNDING AVAILABLE IN 2000-01											$33,303,979
CUMULATIVE EMS INCREASE (i.e. Increase over 2000-01)											$18,005,954
NO. OF CORE COVERAGE AREAS WITH FULL-TIME (24 / 7) SITES											
Full-time (24 / 7) Coverage at end of Year 1	1	1	2	1	3	2	1	1			12
Full-time (24 / 7) Coverage added during Year 2 (i.e. 2002-03)	1	1	1	2	5	6	2	2			20
Full-time (24 / 7) Coverage at end of Year 2	2	2	3	3	8	8	3	3			32

Saskatchewan Emergency Medical Services (EMS) Development Project

Attachment V

Funding to Patient Flow Zones - Recommended Phase In

YEAR 3 - ADD FULL-TIME 24 / 7 COVERAGE TO 18 ADDITIONAL CORE COVERAGE AREAS.

	Estevan	North Battleford	Northwest	Prince Albert	Regina	Saskatoon	Swift Current	Yorkton	Northern Saskatchewan	CAPA	TOTAL
EXTERNAL OVERSIGHT AND CO-ORDINATION (A)	$170,190	$170,190	$170,190	$170,190	$256,770	$256,770	$170,190	$170,190			$1,534,680
PROGRAM DELIVERY COSTS (B)											
Field staff	$1,306,960	$1,296,201	$1,443,696	$2,214,792	$8,603,109	$8,793,151	$1,455,357	$2,428,931			$27,542,197
Administrative and Operations personnel	$276,705	$689,715	$305,370	$689,715	$952,380	$689,715	$689,715	$689,715			$4,983,030
Non-salary	$382,713	$442,220	$577,176	$852,235	$3,735,968	$3,772,462	$507,047	$705,143			$10,974,964
Cost of working capital	$12,965	$16,010	$15,338	$24,770	$87,636	$87,398	$17,486	$25,212			$286,814
Capital replacement	$392,529	$395,034	$515,038	$715,269	$2,479,554	$2,690,949	$454,775	$650,518			$8,293,666
Other									$4,251,428	$1,000,000	$5,251,428
Total - Program Delivery Costs	$2,371,872	$2,839,179	$2,856,617	$4,496,781	$15,858,648	$16,033,674	$3,124,381	$4,499,518	$4,251,428	$1,000,000	$57,332,099
ESTIMATED FUNDING AVAILABLE IN 2000-01											$33,303,979
CUMULATIVE EMS INCREASE (i.e. Increase over 2000-01)											$24,028,120
NO. OF CORE COVERAGE AREAS WITH FULL-TIME (24 / 7) SITES											
Full-time (24 / 7) Coverage at end of Year 2	2	2	3	3	8	8	3	3			32
Full-time (24 / 7) Coverage added during Year 3 (i.e. 2003-04)	1	-	-	1	6	8	-	2			18
Full-time (24 / 7) Coverage at end of Year 3	3	2	3	4	14	16	3	5			50

Saskatchewan Emergency Medical Services (EMS) Development Project

Attachment V

Funding to Patient Flow Zones - Recommended Phase In

YEAR 4 - ADD FULL-TIME 24 / 7 COVERAGE TO 18 ADDITIONAL CORE COVERAGE AREAS.

NOTE: By end of Year 4, all 67 Core Coverage Areas will have full-time 24 / 7 coverage.

	Estevan	North Battleford	Northwest	Prince Albert	Regina	Saskatoon	Swift Current	Yorkton	Northern Saskatchewan	CAPA	TOTAL
EXTERNAL OVERSIGHT AND CO-ORDINATION (A)	$170,190	$170,190	$170,190	$170,190	$256,770	$256,770	$170,190	$170,190			$1,534,680
PROGRAM DELIVERY COSTS (B)											
Field staff	$1,306,960	$1,619,934	$2,018,059	$2,798,200	$9,901,694	$10,099,881	$1,725,420	$2,428,931			$31,899,080
Administrative and Operations personnel	$276,705	$689,715	$305,370	$689,715	$952,380	$689,715	$689,715	$689,715			$4,983,030
Non-salary	$382,713	$442,220	$577,176	$852,235	$3,735,968	$3,772,462	$507,047	$705,143			$10,974,964
Cost of working capital	$12,965	$18,144	$19,125	$28,616	$96,198	$96,014	$19,267	$25,212			$315,541
Capital replacement	$392,529	$395,034	$515,038	$715,269	$2,479,554	$2,690,949	$454,775	$650,518			$8,293,666
Other									$4,251,428	$1,000,000	$5,251,428
Total - Program Delivery Costs	$2,371,872	$3,165,047	$3,434,767	$5,084,035	$17,165,795	$17,349,021	$3,396,225	$4,499,518	$4,251,428	$1,000,000	$61,717,709
ESTIMATED FUNDING AVAILABLE IN 2000-01											$33,303,979
CUMULATIVE EMS INCREASE (i.e. Increase over 2000-01)											$28,413,729
NO. OF CORE COVERAGE AREAS WITH FULL-TIME (24 / 7) SITES											
Full-time (24 / 7) Coverage at end of Year 3	3	2	3	4	14	16	3	5			50
Full-time (24 / 7) Coverage added during Year 4 (i.e. 2004-05)	-	1	2	2	5	6	1	-			17
Full-time (24 / 7) Coverage at end of Year 4	3	3	5	6	19	22	4	5			67

Saskatchewan Emergency Medical Services (EMS) Development Project

Attachment W

Targeted Funding for Northern Saskatchewan

	Northern Saskatchewan		
	Keewatin Yathe	Mamawetin Churchill River	Total
Target level of funding:			
NORTHERN SASKATCHEWAN			
Provide funding sufficient to operate the equivalent of XX minimum-staffed full-time 24 / 7 sites.....	2.5 sites	2.0 sites	4.5 sites
x Amount per minimum-staffed full-time 24 / 7 site.....	$944,762	$944,762	$944,762
= Total costs	$2,361,904	$1,889,523	$4,251,428

Saskatchewan Emergency Medical Services (EMS) Development Project

Targeted Funding for Northern Saskatchewan

Attachement W: Equivalent Cost of a Mid-Sized Operation

Sites at Minimum Staff, sorted in descending order, by Kms.

Community	Kms.	Field FTE (incl. Relief)	Total Cost
Meadow Lake	84,502	9.61	$844,035
Estevan	76,777	9.61	$842,252
Unity	63,036	9.61	$814,393
Assiniboia	62,703	9.61	$798,007
Kelvington	61,388	9.61	$789,245
Melfort	58,588	9.61	$820,574
Preeceville	55,644	9.61	$781,480
Maple Creek	55,430	9.61	$781,779
Punnichy	54,740	9.61	$781,462
Lloydminster	53,346	9.61	$809,744
Kindersley	49,701	9.61	$772,979
Spiritwood	48,252	9.61	$773,568
Kamsack	48,075	9.61	$779,842
Shaunavon	47,411	9.61	$768,783
Bengough	46,943	9.61	$768,831
Moosomin	45,899	9.61	$771,863
Loon Lake	45,832	9.61	$696,743
Carrot River	45,260	9.61	$768,448
Strasbourg	43,305	9.61	$696,914
Broadview	41,921	9.61	$764,101
Leross	41,878	9.61	$766,873
Leader	41,489	9.61	$692,912
Blaine Lake	40,711	9.61	$762,365
Humboldt	39,872	9.61	$771,555
Shellbrook	39,078	9.61	$693,889
Indian Head	38,471	9.61	$767,225
Esterhazy	36,946	9.61	$760,312
Fillmore	35,889	9.61	$757,445
Rosetown	35,733	9.61	$758,314
Kerrobert	35,044	9.61	$687,068
Melville	34,965	9.61	$760,867
Canora	34,852	9.61	$763,699
Oxbow	34,406	9.61	$754,312
Canwood	32,739	9.61	$687,047
Watson	32,275	9.61	$685,628
Kipling	31,754	9.61	$683,293
Gravelbourg	31,274	9.61	$683,328
Ponteix	29,657	9.61	$679,196
Davidson	29,096	9.61	$680,391
Eston	28,488	9.61	$679,743
Fort Qu'Appelle	28,131	9.61	$760,250
Central Butte	26,528	9.61	$677,303
Biggar	26,471	9.61	$679,899
Watrous	25,521	9.61	$677,222
Outlook	24,941	9.61	$677,259
Maidstone	22,642	9.61	$671,286
Big River	20,115	9.61	$668,378
Rosthern	20,083	9.61	$675,156
Cupar	19,708	9.61	$668,269
Wakaw	18,956	9.61	$669,702
Porcupine Plain	18,165	9.61	$665,677
Cut Knife	16,453	9.61	$664,285
Hudson Bay	14,607	9.61	$662,093
Whitewood	11,833	9.61	$658,855

Maximum..... $844,035

Mid-Sized Operations, sorted in descending order, by Kms.

	Kms.	Field FTE (incl. Relief)	Total Cost
St. Walburg	126,164	12.29	$1,070,372
Elfros	119,545	10.46	$977,214
Carlyle	107,987	10.75	$980,488
Tisdale	69,272	10.12	$900,575
Weyburn	56,132	9.72	$886,582
Nipawin	40,841	9.66	$853,339

Average..... $944,762

Major sites, sorted in descending order, by Kms.

Saskatoon	1,332,326	63.82	$6,643,312
Regina	1,104,581	58.67	$5,992,017
Prince Albert	260,882	21.67	$2,284,664
Yorkton	209,311	19.27	$1,981,496
North Battleford	163,548	19.21	$1,871,367
Swift Current	159,946	14.12	$1,610,255
Moose Jaw	127,055	20.70	$2,060,317

Saskatchewan Emergency Medical Services (EMS) Development Project

Attachment X

External Oversight and Co-Ordination

ANNUAL SALARIES	Dollars per FTE
Administrator	$65,000
Training / Quality Improvement Co-Ordinator	$47,000
Training Co-Ordinator	$47,000
Quality Improvement Co-Ordinator	$47,000
Administrative Assistant	$27,000
Part-time Medical Director	$70,000

FULL-TIME EQUIVALENTS (FTE's)	Estevan	North Battleford	Northwest	Prince Albert	Regina	Saskatoon	Swift Current	Yorkton	TOTAL
Administrator	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	8.00
Training / Quality Improvement Co-Ordinator	1.00	1.00	1.00	1.00	-	-	1.00	1.00	6.00
Training Co-Ordinator	-	-	-	-	1.00	1.00	-	-	2.00
Quality Improvement Co-Ordinator	-	-	-	-	1.00	1.00	-	-	2.00
Administrative Assistant	1.00	1.00	1.00	1.00	2.00	2.00	1.00	1.00	10.00
Part-time Medical Director	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.74
	3.09	3.09	3.09	3.09	5.09	5.09	3.09	3.09	28.74

ESTIMATED TOTAL ANNUAL COST	Estevan	North Battleford	Northwest	Prince Albert	Regina	Saskatoon	Swift Current	Yorkton	TOTAL
Salaries	$145,462	$145,462	$145,462	$145,462	$219,462	$219,462	$145,462	$145,462	$1,311,692
Employee Benefits (@ 17% of salaries)	$24,728	$24,728	$24,728	$24,728	$37,308	$37,308	$24,728	$24,728	$222,988
	$170,190	$170,190	$170,190	$170,190	$256,770	$256,770	$170,190	$170,190	$1,534,680

Saskatchewan Emergency Medical Services (EMS) Development Project

Attachment Y

Labour Market Analysis and Estimated Annual Training Costs

Ambulance Personnel	Southern Saskatchewan — Targeted FTE (including relief), assuming system will operate as: 0 Patient Flow Zones	20 Shared Coverage Areas	67 Core Coverage Areas	Northern Saskatchewan — Targeted FTE (including relief), assuming system will operate with: the equivalent to 4.5 full-time ems, with 1 IMT P / FMT arrangements (i.e. 4.5 full-time ems x 9.61 FTE per full-time ems)	Saskatchewan Total — Targeted FTE (including relief), assuming system will operate as: 0 Patient Flow Zones	20 Shared Coverage Areas	67 Core Coverage Areas	Average Positions (Bodies) per FTE (Source: 1998 Health Employer Survey): Total Hours per occupation	1 FTE equivalent (A)	Total Positions: Full Time	Part Time	Casual	Vacant	Total (B)	Per Cent Full Time Worked (A/B)	Per Cent Full Time Worked (Adjusted)	Estimated Personnel Requirement — Estimated Positions in New System, assuming system will operate as: 0 Patient Flow Zones	20 Shared Coverage Areas	67 Core Coverage Areas	Estimated Positions that will continue to be employed in small services	Estimated Total Requirement in Emergency Health System, assuming system will operate as: 0 Patient Flow Zones	20 Shared Coverage Areas	67 Core Coverage Areas	Current Supply (as of Oct 3, 2000)	Estimated Incremental Requirement, assuming system will operate as: 0 Patient Flow Zones	20 Shared Coverage Areas	67 Core Coverage Areas	Estimated Training Requirement (required by end of Year 3)
EMT-P	76.02	77.84	82.43	21.62	97.64	99.46	104.05	217,978	99.81	82	7	21	4	116	83.9%	100.0%	98	99	104	1	101	102	105	105	-	-	2	→ 10
EMT-A	80.14	81.26	81.83		80.14	81.26	81.83	108,343	49.61	50	3	6	8	67	74.0%	60.0%	134	135	136	12	146	147	148	101	45	46	47	→ 45
EMT	466.42	505.97	514.92	21.62	518.04	527.60	536.54	629,792	288.37	225	167	300	15	607	47.5%	60.0%	863	879	894	96	959	975	990	645	316	332	347	→ 341
Other Ambulance Attendants (e.g. EMR)	115.58	118.47	120.09		115.58	118.47	120.09	127,036	58.18	17	75	254	4	350	16.6%	60.0%	193	197	200	255	448	452	455	500 (*)	-	-	-	→ 0
ALL AMBULANCE PERSONNEL	748.16	783.54	799.27	43.25	811.40	830.79	842.51	1,083,189	495.97	374	252	481	31	1,110			1,288	1,310	1,334	366	1,654	1,676	1,700	1,349	361	378	396	396

(*) : 500 EMR's = 408 EMR's, plus approximately one-half of the 142 EMR/First Responders
(See Table 1 for Number of Certified EMS Personnel by Level)

Estimated cost per student	$5,500
Estimated total cost	$2,178,000
Costs expected to be incurred as follows:	
Year 1 (2001-02)	$726,000
Year 2 (2002-03)	$726,000
Year 3 (2003-04)	$726,000
Year 4 (2004-05)	$0
	$2,178,000

Saskatchewan Emergency Medical Services (EMS) Development Project

Attachment Y

SIAST EMT Training Costs

(Assumes Costs are the same for EMT, EMT-A, and EMT-P)

SIAST Budget Proposal

Alternate Weekend Program

Lead Instructor		$17,392.00	
Part-time Instructor		$6,720.00	
Monitoring		$1,100.00	
Benefits		$3,907.86	
	Sub-total	***$29,119.86***	***$29,119.86***
Disposable Supplies		$1,880.00	
Equipment		$2,160.00	
Driving Component		$900.00	
	Sub-total	***$4,940.00***	***$4,940.00***
Staff Recruitment		$100.00	
Telephone fax/E-Mail		$50.00	
Postage & Cartage		$50.00	
Printing photocopying		$100.00	
BTLS Certification		$120.00	
	Sub-total	***$420.00***	***$420.00***
Mileage		$8,537.00	
Sustenance		$2,376.00	
Accommodation		$4,620.00	
	Sub-total	***$15,533.00***	***$15,533.00***
	Total		***$50,012.86***
SIAST Admin Fee			***$9,822.57***
	Grand Total		***$59,835.43***

MAX. - 12 students

Instruction.....	**$4,986.29**	**per student**
Text Books.....	**$459.88**	**per student**
Total Cost.....	**$5,446.17**	**per student**
Say,.....	**$5,500.00**	**per student**

This quote is based on adding 60 hours (10 days) to the program to meet the new standards, but could change significantly if they move to toward a combined EMT/EMT-A program in 2002, and that will likely be the case.

Saskatchewan Emergency Medical Services (EMS) Development Project

Attachment Z

Implementation and Transition - Saskatchewan Health Personnel

	Full-time Equivalent (FTE)	Level	Salary (top of scale)	Annual Cost
Project Manager	1.00	P7	$69,584	$69,584
Accountant/Research	1.00	P5	$60,258	$60,258
Accountability/funding/reporting systems:				
Information Technology	1.00	P5	$60,258	$60,258
Administration/Support	0.50	P3	$51,653	$25,827
Development/Implementation of CQI and training:				
Manager	1.00	P7	$69,584	$69,584
Analyst	0.50	P5	$60,258	$30,129
	5.00		Salaries	$315,640
			Benefits (@ 17%)	$53,659
			Total	$369,299